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ABSTRACT

This document reports on a research project covering the attitudes of craft apprentices toward the objectives of further education and the incentives in pursuing craft apprenticeship courses. The experimental design was ad hoc. The Research Officer drew up an interview schedule which would elicit information on some of the major attitudinal areas. A test was also used. In addition, a short personal questionnaire was drawn up for administration with the Attitude Scale to large numbers of students in further education colleges. Four colleges in Central Scotland were involved in this project. Information was obtained from a maximum of 2140 students. Among the basic items of information obtained were the ways in which students progress or fail to progress from year to year of their college attendance and the explanations which students give for discontinuing their college attendance. Each grouping into which students can be divided produces a slightly different profile of attitudes and influences. This indicated that there is no overall prescription which would cure the problems set out in this investigation, but that the attitudes of each grouping into which students can be divided must be considered separately. By revealing some of the incentives and disincentives perceived by craft students in further education and objectives of these students, this investigation may provide the further education service with information required for consideration of changes in colleges and courses along the lines indicated by these craft students. (Author/CK)

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A DAY OFF...WORK?

ED 058551

THE SCOTTISH COUNCIL FOR RESEARCH IN EDUCATION

A DAY OFF WORK?

The Attitudes of Craft Appprentices to Further Education

by

A D WEIR

August 1971

PREFACE

There has in recent years been a very major expansion in further education provision. There has, however, been very minimal research in the further education field.

Consultation between the Scottish Education Department and the Research Council led to a recommendation that the Council should undertake a research project covering some major aspect of further education provision. It was decided to attempt some assessment of the attitudes of craft apprentices in relation to the objectives of further education and the incentives in pursuing craft apprenticeship courses.

The conclusions which are outlined in the report, some inevitably tentative, support many subjective impressions but also indicate some very strongly demonstrated attitudes which may be of significance to all concerned with the organisation of courses, the design of buildings and the provision in general for craft apprentices.

The task of carrying out the investigation and of writing this report has fallen on the Council Research Officer, Mr A D Weir, whose name appropriately appears on the title page as author. The committee desire to express their thanks to him for this work.

R B Forbes
Convener

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ACKNOWLEDGEMENTS

During the three years of this investigation I have been very conscious of the constant support and advice of many people.

The Council Committee who proposed this project and appointed me to carry this out, have been very patient in their consideration of my various drafts. In particular I should like to mention my appreciation of the unfailing support of the late W S Gray HMCI, whose untimely death was a grave loss to all who care about further education.

The Principals and staffs of the four colleges concerned have shown a welcome interest in the investigation and have borne my additional calls on their valuable time with much good humour.

The whole staff of the Research Council have been very understanding of the problems involved in a research of this nature, especially the secretarial staff who have had to withstand numerous revisions. I would particularly like to thank my colleagues Dr D A Walker, former Director, and Mr G J Pollock, Acting Director, for on the one hand restraining my over-exuberance, while on the other hand allowing me to learn by my own mistakes.

But above all, my thanks go to the 2140 craft students who willingly committed themselves in interview and questionnaire and whose views I trust I have recorded faithfully.

A D WEIR

April 1971.

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COURSES FOR CRAFTSMEN

GLOSSARY OF ABBREVIATIONS USED IN THE TEXT

BEC	Basic Engineering Craft
BR	Block Release
C & G	City and Guilds of London Institute
CC	Catering Craft
DR	Day Release
EI	Electrical Installation
FEC	Fabrication Engineering Craft
FT	Full Time
HNC	Higher National Certificate
JR	Joiners
LS	Liberal Studies
MEC	Mechanical Engineering Craft
ONC	Ordinary National Certificate
NS	No significant differences
P	Passes
R & F	Repeats and Failures
RG	Registrar General
YEO	Youth Employment Officer

CHAPTER 1

EXPERIMENTAL DESIGN AND METHOD

1 The nature of the investigation

As a result of a meeting between representatives of the Scottish Education Department and the Research Council, a committee was set up to discuss the possibilities of research in the field of further education. The proposals of that committee were accepted by the Council's Executive, and form the basis of the present Courses for Craftsmen project.

These proposals were to ascertain (a) what students in craft courses accepted as the present objectives of further education and what they considered ought to be the objectives; (b) what they regarded as the present incentives and disincentives to learning in these courses, and what they considered ought to be the incentives.

2 The design of the experiment

Since the Courses for Craftsmen project was a first venture into a relatively unresearched area of education, the experimental design was very largely ad hoc. It had however been decided at an early stage in the planning of the project that much of the final report would be descriptive and that the material could best be assembled by means of interviews with randomly selected students. In addition it was decided that some attempt to measure students' attitudes in an objective way should be made.

From his experience in the field of further education, the Research Officer drew up an interview schedule (Appendix C), which would elicit information on some of the major attitudinal areas. For the objective assessment of attitudes, the Research Officer further refined a test devised by R Ann Abel[1] and subsequently

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1 "The effect of compulsory part-time Day Release education upon the Attitudes towards Further Education of ex-Secondary Technical and Modern School boys", MA(Educ) Thesis, London 1964

adapted by G J Pollock[1] (Appendix B). After some trials with this instrument a final version was drawn up (Appendix B2). To complete the materials to be used in the initial stage of the project, a short personal questionnaire (Appendix A) was drawn up for administration with the Attitude Scale to large numbers of students in further education colleges.

After the first stage of the project had been carried out in college session 1967/68, changes in the procedures were adopted. The questions and answers from the first set of interviews were set down in questionnaire form (Appendix E), for administration to still larger numbers of students. In addition, the second stage of the project, conducted in 1968/69, made use of the Attitude Scale, some additional personal information (Appendix A2), and interviews with approximately half the students interviewed on the first occasion (Appendix C2).

One further innovation in 1968/69 was the experimental selection procedure devised by the Research Officer to test a hypothesis thrown up by the first part of the project. This selection procedure made use of the Attitude Scale, the DAT Space Relations Test,the APU Mechanical Comprehension Test, and the APU Abstractions Test.

3 The colleges

It is the general policy of the Research Council not to identify schools or colleges which participate in one of its research projects. In subsequent chapters of the report, however, there are frequent comments made about differences between the colleges involved in this particular project. The Committee supervisors of the project considered that it would assist the reader in evaluating these comparisons if brief descriptions of the colleges were included, without however naming them.

All four colleges were in Central Scotland.

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[1] Report (in preparation) on National Certificate Courses.

College A - a large city college with a total student population of over 6000. A considerable number of students were following post-Higher National Certificate courses on a sandwich or full time basis, while many of the others were following C & G Technician or ONC/HNC courses. The college was opened in the mid-1960's. There were many flourishing student activities organised by an energetic Students' Association.

College B - a large college in the heart of a major industrial centre with a total student population of approximately 5000. Only a negligible number of students followed sandwich or full time courses, and while many of the others followed C & G Technician or ONC/HNC courses, the majority of students followed craft level courses. The college was opened in the mid-1960's. There were a few student activities, largely dependent for their success on the enthusiasm of members of staff, although some students were energetically organising a Students' Association.

College C - a large city college with a total student population of over 7000. The college was designed by the local authority to cater for the first years of further education and apart from a considerable intake of SCE students in the General Studies department, almost all students were following craft level courses or the first years of C & G Technician courses. The college was opened in the late 1960's. There was a wide range of student activities, although there had been little time to organise a formal Students' Association.

College D - a small county college with a total student population of only a few hundred. This was a new college operating in temporary buildings. Almost all students were following craft level courses. There were few opportunities for student activities, although this again might change following the transfer to newer premises.

4 The Sample

The initial intention of the Courses for Craftsmen Committee was that the project should be limited mainly to Day Release students in the main craft courses in a large city college (College A). The impending opening of a new college (College C) and the subsequent transfer there of many students from College A had the consequence that a sample from College A would be restricted and atypical. At the Research Officer's suggestion, it was decided to extend the investigation to a large college in another area (College B).

The City and Guilds craft courses selected for investigation were Course 80 (Carpentry & Joinery), Course 193 (Mechanical Engineering Craft), Course 393 (Basic Engineering), Courses 51A, B, C (Electrical installation craft), Courses 147, 150, 151 (Catering Craft) and Course 360 (Fabrication Craft).[1]

1.41 The initial potential population

College Enrolments 1967/8

College	Year 1 A	Year 1 B	Year 2 A	Year 2 B	Year 3 A	Year 3 B	Year 4 A	Year 4 B	Total A	Total B	Total
Course											
JR		58	*101	59	*101	58	50	26	252	201	453
MEC		50		113	135	88		56	135	307	442
BEC		98								98	98
EI		74		69		52				195	195
FEC	60	27	47	15					107	42	149
CC (Full-time)	40	24						))			
CC (Day Release)		10		8		16		) 10)	40	68	108
Totals	100	341	148	264	236	214	50	92	534	911	1445

* includes 15 Block Release students.

Due to difficulties experienced with college timetabling and mistakes in college records, the actual numbers sampled by the Research Officer were as follows:

[1] To be known hereafter as JR, MEC, BEC, EI, CC, and FEC respectively.

1.42 Number of students contacted 1967/8

	Actual numbers sampled										
	Year 1		Year 2		Year 3		Year 4		Total		Total
College	A	B	A	B	A	B	A	B	A	B	
Course											
JR		51	92*	49	88*	47	48	22	228	169	397
MEC		39		95	101	80		49	101	263	364
BEC		105								105	105
EI		49		65		44				158	158
FEC	0	22	19	13					19	35	54
CC (Full-time)	31	19						)			
CC (Day Release)		7		0		15		10)	31	51	82
Totals	31	292	111	222	189	186	48	81	379	781	1160

* JR A 2 includes 16 Block Release students. JR A 3 includes 11 Block Release students.

At the beginning of the 1968/9 session, some of the students of College A were transferred to College C, and some of the students of College B were transferred to a fourth college in yet another area (College D). It was decided to follow these students who were now in FEC 2 and 3 at College C and MEC 3 at College D and, at the same time, include in the investigation any students at these two new colleges who were following the courses already sampled.

In 1968/9, the original 1160 students had redistributed themselves as follows:

1.43 Sample members' progress 1967/8 to 1968/9

	Student progress						
	Moved to next year	Moved two years	Gone to other course	Gone to other college	Repeats	Left or unknown	Total
COLLEGE A							
JR 2	72	2	1			17	92
JR 3	41			1	1	45	88
JR 4	11	10			5	22	48
MEC 3	50		4	4	23	20	101
FEC 2			1	11		7	19
CC Full-time			1			30	31
Totals	174	12	7	16	29	141	379

	Moved to next year	Moved two years	Gone to other course	Gone to other college	Repeats	Left or unknown	Total
COLLEGE B							
JR 1	45					6	51
JR 2	35	6				8	49
JR 3	10				17	20	47
JR 4	9	8				5	22
MEC 1	22		4		5	8	39
MEC 2	32		4	32	18	9	95
MEC 3	65		1	4	4	6	80
MEC 4	16	8	1	3	10	11	49
BEC	72		18	13		2	105
EI 1	43		1		2	3	49
EI 2	43		1		8	13	65
EI 3	31				2	11	44
FEC 1	15					7	22
FEC 2	7					6	13
CC Full-time	16					3	19
CC 1	4			2		1	7
CC 3	12				1	2	15
CC 4					1	9	10
Totals	477	22	30	54	68	130	781
Grand Total	651	34	37	70	97	271	1160

1.44 Student wastage

Comparison of same courses in Colleges A & B

	Still in attendance in 1968/9	Left
COLLEGE A	68.1%	31.9%
COLLEGE B	78.7%	21.3%

The 271 students who had left or whose progress was unknown in any of the four colleges were sent a post inquiry in an attempt to trace their progress. By this means 132 (48.7%) former students were traced. Their replies are listed below.

1.45 Reasons for student wastage

Reasons for leaving college

		Number	Percentage
1	Change of trade	6	4.6%
2	Change of firm	12	9.1%
3	Apprenticeship finished	24	18.2%
4	Firm allowed me to leave	13	9.8%
5	Firm refused to continue my day release	14	10.6%
6	Home difficulties	6	4.6%
7	No further suitable course	39	29.5%
8	Other (mainly bad college record or illness)	18	13.6%
	Total	132	

Apart from the 889 students from 1967/8 who were still in one of the four colleges in 1968/9, the number of students investigated in 1968/9 was increased to 1707 in the following manner:

1.46 Students contacted 1968/9

Basic composition of 1968/9 population

Continuing from 1967/8	889
New to Colleges A & B courses	155
First year classes of all colleges	468
In attendance 1967/8 but absent on day of tests	88
Added from same courses in Colleges C & D	184
Total	1784
Less those absent at 1968/9 tests	77
Total	1707

1.47 Students contacted 1968/9, by year, college and course

Actual numbers sampled 1968/9

	Year 1				Year 2			Year 3				Year 4			Year 5		Totals				
Colleges	A	B	C	D	A	B	C	A	B	C	D	A	B	C	A	B	A	B	C	D	All
Courses																					
BEC		102	55	34														102	55	34	191
MEC		34	25			55	32	102	86		51	79	77			22	181	274	57	51	563
EI		37				71			57				10					175			175
JR		42			58	59		84	45			46	16		19	13	207	175			382
FEC						32	48		8	34								40	82		122
CC (Full-time)	18	21		49													18	21	49		88
CC (Day Release)		12		39		5	30		17	40			13	30				47	139		186
Totals	18	248	168	34	54	222	110	186	213	74	51	125	116	30	19	35	406	834	38285		1707
Totals		468				390			524				271			54					1707

An investigation of the representativeness of these populations has been made by means of Scottish Educational Statistics 1968, and it seems that the project population differs from the actual Scottish population in the named courses in two details, namely:

(a) Electrical students are under-represented and Catering students over-represented. Comparing the Scottish figures for students against the sample figures we find the following percentages.

	National	Sample
Building	28.8%	22.4%
Engineering	44.8%	51.3%
Electrical	21.6%	10.3%
Catering	4.8%	16.0%

(b) In the Engineering and Building courses nationally, there are respectively 7% and 40% of their total students on Block Release courses; these are hardly represented in the project.

5 The interview sub-sample

It was decided to interview approximately 25 of each year group in 1967/8, and 15 of the same students (no matter what direction their further education course had taken) in 1968/9. These interviewees were to be selected at random from the various year groups in the larger population. Once again these targets were not always exactly met. In 1967/8 the discrepancies were due to college needs which could not be overcome; in 1968/9 the discrepancies were due to the unevenness with which students gave up their studies (see Table 1.43) resulting in some groups of interviewees almost disappearing from further education altogether.

1.51 Students interviewed on each occasion, by college, course and year

Location and numbers of students interviewed

COLLEGE A

1967/8				1968/9	
Course	Number	Transferred to		Course	Number
JR 2	30	JR 3	16	JR 3	16
JR 3	24	JR 4	10		
JR 4	25	JR 4	4	JR 4	14
		JR 5	11	JR 5	11
MEC 3	25	MEC 3	4	MEC 3	4
		MEC 4	15	MEC 4	15
FEC 2	8				
CC FT	13				
Totals	125		60		60

College B

1967/8			1968/9	
Course	Number	Transferred to	Course	Number
JR 1	25	JR 2 16	JR 2	16
JR 2	24	JR 3 11		
		JR 4 4		
JR 3	25	JR 3 5	JR 3	16
		JR 4 3	JR 4	7
JR 4	15	JR 5 9	JR 5	9
BEC	30	MEC 3 9		
		EI 1 2		
		EI 2 2		
MEC 1	25	MEC 1 2	MEC 1	2
		EI 2 1		
		MEC 2 9		
MEC 2	23	MEC 2 5	MEC 2	14
		MEC 3 5		
MEC 3	25	MEC 3 2	MEC 3	16
		MEC 4 13		
MEC 4	24	MEC 4 5	MEC 4	18
		MEC 5 11	MEC 5	11
EI 1	25	EI 1 1	EI 1	3
		EI 2 12		
EI 2	25	EI 2 1	EI 2	16
		EI 3 14		
EI 3	22	EI 3 4	EI 3	18
		EI 4 11	EI 4	11
CC FT	12	CC 3 8		
CC 2	4	CC 3 1	CC 3	9
CC 3	7	CC 4 6	CC 4	6
CC 4	4			
Totals	315	172		172
All students	440	232		232

Summary

The "Courses for Craftsmen" project committee intended that this research should provide a description of craft apprentices in further education. The research worker accordingly concentrated on only four technical colleges, and five craft courses. By means of an Attitude Scale and various questionnaires, information was obtained from a maximum of 2140 students. In addition, 208 students were interviewed once, and 232 were interviewed twice.

Among the basic items of information obtained were the ways in which students progress or fail to progress from year to year of their college attendance (1.43) and the explanations which students give for discontinuing their college attendance (1.45).

Comments on the design and method of the experiment

Using the interview as the main research tool has turned out to be of particular value with craft apprentices who find it difficult to handle any writing task. Naturally much of the material gained from interviews does not lend itself to statistical treatment, but in a project such as Courses for Craftsmen, where a description of the area was a prime intention, the lack of large-scale statistical treatment is not undesirable.

The Attitude Scale yielded pointers in many different directions, and the questionnaires were of value in gaining corroborative evidence from a much larger population than could ever be interviewed.

The sample must however be regarded as a judgement sample and there is no guarantee that the students investigated are typical of students throughout the country. In addition, within each college the courses selected may not be completely representative of the craft students of that college. The comments made in subsequent chapters must be taken to refer only to the colleges and courses investigated.

The major piece of encouragement to the Research Council is the cooperation secured from the staff and students of the various Technical Colleges visited. The obvious sincerity with which the Research Officer's inquiries were answered enables him to attach considerable weight to the information in this report.

References

The effect of compulsory part-time Day Release education upon the Attitudes towards Education of Ex-Secondary Technical and Modern School boys - R Ann Abel (MA thesis, London 1964)

National Certificate Courses - G J Pollock (SCRE - in preparation)

Scottish Educational Statistics 1968 - HMSO

CHAPTER 2

THE 1967/8 INTERVIEW RESULTS

1 Procedure

The interviewing in 1967/8 proved to be highly successful. In all, 440 students were interviewed, 125 in College A and 315 in College B. Of these 440, 73 were Full Time (FT) or Block Release (BR) students.

Both colleges were very helpful in providing facilities for interviewing, and the reasonably comfortable surroundings helped the students to respond enthusiastically. The length of the interviews varied considerably, with some students taking only a few minutes and others taking over an hour. Generally, however, the interviews lasted about 30 minutes.

(A transcript of some interviews and a description of the method of interpreting answers will be found in Appendix D.)

2 Analysis

The interview results are presented for all students and also for a number of groups. These groups are (a) individual colleges, (b) individual courses, (c) modes of attendance, ie Day Release, Block Release or Full Time, (d) stage of City and Guilds course, ie Part 1 or Part 2.

Each question will be presented separately, with a discussion of the results and of any significant differences shown by a χ^2 analysis.[1] If there are no statistically significant differences between groups, eg if the results between the two colleges show no significant difference, then separate results for these groups will not be presented.

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[1] χ^2 analysis is used to ascertain whether the differences found to exist between the groups under consideration could have risen in drawing random samples from a large population. If the differences are so large that they could only have arisen by chance once in a hundred samples, they are said to be significant at the 1% level. Similarly the 0.1% level of significance denotes a one in a thousand chance.

In every case, the results will be presented as percentages and an indication of the number of students in that category will also be presented. In some instances it will seem as if more than the possible number of students had responded. This happens because, using an open-ended interviewing procedure, there are occasions when students make multiple responses. Where there are multiple responses, the analysis of the results will take this into account. There are also cases when the number of responses seems to be very low. This generally occurs when a particular question is not applicable, eg students in MEC 3 at College A did not have Liberal Studies on their timetable.

3 Results

2.301 Aspects of college facilities

Question 1 b "What do you think of the college facilities in general?"

(Percentages)

(i) College Facilities	Good	Reasonable	Bad	No reference	Significance level	n
All students	5	16	38	41		440
FT and BR	1	6	52	41)	0.1	73
DR	6	17	37	41)		367

(ii) College Lunches	Good	Reasonable	Bad	I go out	I go home	No reference	n
All students	13	23	12	32	5	15	440

(iii) Common Rooms	Good	Reasonable	Bad	Unused	No reference		n
All students	2	8	22	15	53		440
College A	3	6	13	25	53)	.01	125
College B	2	9	25	11	53)		315

General observations on these results suggest that students were rather disappointed by the facilities provided. This may be of course a reflection of unfair comparisons made by the students between college facilities and the commercial facilities they used in their spare time.

The large percentage under "No reference" is due to the nature of the question. Like many questions, Q1 b is very open-ended and therefore each student mentioned some aspect of the question and ignored others. This fault was rectified in the Multiple Choice Questionnaire and a more representative set of answers to this question is to be found in Chapter 6.11 - 6.17.

Facilities were considered to be particularly poor by the FT and BR students, while the difference between the colleges on the topic of Common Rooms is largely attributable to the number of College A students not using such facilities.

2.302 Day Release

Question 2 "What do you think of Day Release?"

(Percentages)

	Day off	Good	OK	Bad	Costs money	Not enough	Rather be at work	Significance level	n
All students	5	43	18	12	1	21	12		440
FT and BR	3	24	23	9	1	39	1)	0.1	73
DR	5	47	17	13	1	16	14)		367

When asked about Day Release courses, the students already on this type of course were reasonably content, although there was a sizeable minority who would rather be at work. The significant difference in the replies is that FT and BR students felt that Day Release is not enough.

2.303 Block Release

"What do you think of Block Release?"

(Percentages)

	Better than DR	Too long between blocks	Bad	Costs money	OK	Too much	Significance level	n
All students	50	7	21	8	4	18		440
Joiners (DR only)	41	5	22	18	5	21)	0.1	151
EI " "	56	10	25	1	4	14)		72
MEC" "	54	9	20	1	2	22)		122

From these answers we note that more than half of all students except Joiners felt that they would benefit by attending college on some type of Block Release course. At the other extreme, there were over 20% who considered that Block Release would be a poor alternative, and about 20% who felt that the Block Release courses they knew of meant too much attendance at college.

The statistically significant difference arises from the Joiners being less likely than the other students to have regarded Block Release as better than Day Release. It is worthy of note, however, that these Joiners were the sole group having had direct experience of Block Release courses at an earlier stage in their further education.

2.304 Full-Time Attendance

"What do you think of full-time courses?"

	(Percentages)							
	In favour	Too like school	Work's best	Not wanted	Additional response should be optional		Significance level	n
All students	59	10	10	21	4			430
College A	43	9	8	41	1	)	0.1	119
College B	65	10	11	13	5	)		311
JR	50	13		37		)	0.1	164
EI	71	15		14		)		69
MEC	62	28		10		)		151
CC	66	32		2		)		38

In the case of Full-time courses, there was again generally support for full-time study, except in this instance from the students of College A as a whole. The objections in College A were largely accounted for by the opinions of the Joiners, who formed a bigger percentage of College A students than of College B students. The opposite phenomenon to that noted over Block Release courses seems to be operating. In this case, the students of College A, having more experience of Full-time courses, tended to be more in favour.

2.305 Practical

Question 3 "What do you think of Practical?"

	(Percentages)								
	Good	OK	Bad	Need real tasks	Useful for our future	Need more		Significance level	n
All students	38	15	40	14	3	2			408
College A (DR only)	47	17	30	25	0	0	)		85
College B (DR only)	30	11	59	18	3	4	)	0.1	182
JR (DR only)	46	16	45	18	1	4	)		145
MEC (DR only)	23	10	56	21	3	1	)	0.1	122
FT and BR	54	18	27	3			)		73
DR	35	15	43	17			)	0.1	335

The apprentices interviewed do not seem to have been particularly impressed by the practical instruction they received in college. 14%-25% of the students in all groups except FT students held the opinion that college workshop activities were not realistic enough.

Significant differences are:

(1) College B students were more inclined to say that Practical is "bad".

(2) The Joiners enjoyed their Practical more than the Mechanicals did.

(3) FT and BR students were more in favour of Practical than DR students.

2.306 Theory

"What do you think of Theory?"

	(Percentages)					
	Good	OK	Bad	Useful for our future	Significance level	n
All students	35	25	34	8		405
JR	43	21	30	6)		141
EI	19	24	54	19)	0.1	72
MEC	33	30	38	10)		116
CC	26	33	41	)		39

There were few marked opinions in any direction regarding Theory, with the exception of the Electricians, who saw its value only if they progressed within their trade. The one significant result is that Joiners were more favourable to Theory and Electricians were more unfavourable.

2.307 Calculations

"What do you think of Calculations?"

	(Percentages)				
	Good	OK	Bad	Significance level	n
All students	34	22	44		329
JR	40	25	35)		136
MEC	26	20	54)	1.0	123
CC	61	13	26)		23

In the case of Calculations, the Caterers had seen from their work experience that a knowledge of Book-keeping was essential. The Mechanicals, on the other hand, found that most of the calculating in their job was done for them.

2.308 Technical Drawing

"What do you think of Technical Drawing?"

	(Percentages)						
	Good	OK	Bad	Useful for our future	Only needed for reading	Significance level	n
All students	34	10	23	13	24		328
FT and BR	17	9	51	17	13)	0.1	48
DR	36	10	18	12	27)		280

FT and BR students disliked Technical Drawing much more than did Day Release students. An explanation could be that the majority of these students had completed a fourth year at their secondary school, and many of them held an "O" Grade pass in Technical Drawing, while the drawing they were experiencing at college was elementary by comparison.

2.309 Liberal Studies

"What do you think of Liberal Studies?"

	(Percentages)					
	Good	Bad	Rotten	Prefer a choice of courses	Significance level	n
All students	46	25	32	5		370
College A	27	37	36	2)	2.0	65
College B	49	21	30	5)		305
JR	29	30	41	)		138
EI	75	13	12	)	0.1	72
MEC	43	26	31	)		119
CC	47	21	32	)		38

Liberal Studies is a subject which causes much controversy and, as can be seen from the responses of these students, it led to polarisation of attitudes. It was the least popular of subjects, especially it would seem in College A and among Joiners. In view of this, the degree of support from Electricians was remarkable.

2.310 Teacher qualities

Question 3c "What do you consider are the qualities of a good teacher?"

	(Main responses only)				
	Humorous	Strict	Not Strict	Treats you as an individual	Knows his subject
All students	15	15	13	17	24

	Explains well	Is interesting	Understands you	Talks your language	n
	26	20	22	14	440

The answers to this question show that no single quality in a teacher was seen by all students as being most desirable. They merely give some indication as to what students look for in their teachers.

2.311 Suggested changes in courses

Question 4a "What changes would you suggest in your course?"

	(Percentages)										
	None	More practical	Less practical	More theory	Less theory	More LS	Less LS	PT	Free time	Significance level	n
All students	33	52	3	5	4	3	6	9			440
College A	32	44	1	9	2	6	5	18	6)	1.0	125
College B	33	55	4	3	5	2	7	5	3)		315
FT and BR	42	36	3	4	0	3	7	22	7)	0.1	73
DR	32	55	3	5	5	3	6	8	3)		367

It is in some ways satisfactory that about a third of the students interviewed suggested no changes in their courses. It is however interesting, in view of the fact that the Industrial Training Act implies that practical training is industry's function, that over 50% of all students wanted more practical in college.

Significant differences between the groups appear over the question of PT, where College A students were significantly more anxious for it than College B students and the FT and BR students were more enthusiastic than Day Release students. This may, of course, be explained by noting that College B has better recreational facilities than College A and that FT and BR students had proportionally less PT on their timetable.

2.312 Motivation of students

Question 4b "Why do you try when you are at college?"

	(Percentages)					
	To pass exams	Extrinsic reasons	Intrinsic reasons	Never do	Significance level	n
All students	50	24	32	7		438
JR	50	18	31	10)		168
EI	64	32	13	6)		72
MEC	43	25	39	5)	0.1	152
CC	53	11	42	3)		38

Once again the analysis of the answers to this question had to take account of multiple responses. The response category "Extrinsic Reasons" covers reasons such as pressure from home, work or college, and "Intrinsic Reasons" covers personal satisfaction, desire to learn and the mood of the moment.

In a course where the possession of certificates is seen by the students as being of either immediate or future financial benefit, the desire to pass examinations is most important. The MEC students, however, showed less interest in passing examinations, perhaps because the end result of their course is a City and Guilds Final and not a Full Technological Certificate.

There are significant differences between courses, mainly due to the Electricians being more interested in certificates than in obtaining personal satisfaction from their studies.

2.313 Industrial Training

Question 5a "What kind of training do you get from your firm?"

	(Percentages)					
	I move round the depts regularly	I move round the depts occasionally	I move round if I ask	I do one job	It is haphazard	n
All students	34	12	3	26	25	382

2.314 On the job training

Question 5b "Who teaches you your job?"

	(Percentages)			
	Foreman	Journeyman	No one	n
All students	23	70	7	382

2.315 Contacts with Training Personnel

Question 5c "How much contact do you have with your Training Supervisor?

	(Percentages)					
	Regular	Occasional	Never	On demand	Significance level	n
All students	26	25	41	8		382
JR	20	25	48	7)	1.0	162
EI	25	29	40	6)		72
MEC	37	25	27	11)		122
Part 1 students	29	22	44	5)	0.1	174
Part 2 students	23	31	30	16)		112

Taken as a whole, Question 5 shows that young apprentices were largely unaware of the efforts and interest of their Training Supervisors. Another inquiry, undertaken by James Reilly[1], gives additional information on this topic. Reilly asked building apprentices in Glasgow which person in their firm looked after their training. Essentially, the answers were as follows:

(1)	Training Officer	23%
(2)	Owner	19%
(3)	Foreman	38%
(4)	No one in particular	20%

There are significant differences in the answers to Question 5c. Compared with other courses, Mechanicals had more contact with a Training Officer, and Part 2 students were better able to demand some attention from the Training Officer than Part 1 students.

2.316 Job placement

Question 6a "How did you get this job?"

(Percentages)

	Through the YEO	Through a relative	Through a friend	By answering an advert	By going to the firm	Through school	n
All students	7	15	17	4	48	9	415

At first glance these results seem rather remarkable, and yet the same pattern holds over all categories of students, which forces one to conclude that our young people were of the opinion that they used their own devices in finding employment.

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1 Further Education and the Construction Industry, MEd Thesis, Glasgow 1969

2.317 Job choice

Question 6b "Why did you take this job?"

	(Percentages)								
	I liked similar work at school	It has a future	Good wages	Don't know	Any trade would do	Parent's wishes	Near home	Significance level	n
All students	47	21	6	2	19	4	8		415
JR	55	12	2	2	21	5	4)	0.1	169
EI	30	43	5	1	24	6	8)		72
MEC	50	20	9	2	18	2	15)		122

There are two main factors at work in job choice, (1) the previous experience our young people had at school, and (2) the image of the trade either generally or in the young person's locality. The minor factor of taking the first reasonable job to offer itself is distressing to those who would like to see young people fitted into a job that they could be enthusiastic about.

There are significant differences between courses. Whereas Joiners and Mechanicals based their choice on school experiences, the Electricians were attracted by the good image their trade has at present.

2.318 Student ambitions

Question 8a "What are your ambitions?"

	(Percentages)							
	None	To be good at this job	To get promotion	Emigrate	Personal	Change my job	Significance level	n
All students	11	24	40	16	3	17		440
JR	11	22	40	19	3	15)		169
EI	10	37	40	16	4	15)		72
MEC	10	25	24	26	4	21)	1.0	39
CC	8	15	59	26	1	10)		

(NB For the purposes of the analysis, "Emigration" and "Travel" have been combined.)

There was a considerable desire to emigrate and this is specifically investigated in the second interview. The other desires are reasonably predictable and generally realistic.

Significant differences are due to the desire of the Caterers for promotion, the Mechanicals feeling that their chances of promotion were slim, and the Electricians wishing to master a complex trade.

2.319 Reasons for attending college

Question 8b "What benefits do you think you get from coming to college?"

	(Percentages)					
	Certificates	Experience	Meeting others	Knowledge	No benefits	n
All students	53	28	3	16	16	440

College was seen as primarily of use for the end result, and only secondarily for the additional knowledge and experience. There was a hard core of 16% who saw college as of no use.

2.320 Spare time interests

Question 9a "What do you do in your spare time?"

	(Percentages) (Main activities only are listed)				
	Football	Fishing	Swimming	Films	Dancing
All students	33	9	15	19	39

Drinking	The opposite sex	Clubs and organisations	n
25	24	21	440

These activities give an indication of largely predictable patterns of behaviour.

2.321 Desired additional interests

Question 10a "What other things would you like to do in your spare time?"

	(Percentages)								
	Nothing more	Sport	Hobbies	Social activities	Travel	Outdoor activities	Make money	Significance level	n
All students	37	34	13	13	6	7	1		440
College A	33	50	6	5	6	8	5)	0.1	125
College B	39	28	16	16	5	7	1)		315
Part 1	35	49	20	17	8	7	1)	1.0	210
Part 2	35	35	12	15	5	11	2)		130

The answers to this question reflect the different catchment areas the two colleges draw from. The students' desires are significantly different. College A students coming from an area of extensive social amenities desired more sport facilities, whereas College B students coming from an area where sports facilities are easier to find wished more social amenities. The answers also reflect the age differences between Part 1 and Part 2 students. Part 1 students indicated a significantly greater desire to be active, particularly in sport.

2.322 College's provision of spare time activities

Question 10b "Do you think that the college should provide for leisure interests?"

(Percentages)

	Yes	No	Yes but ..... I have too far to travel	The atmosphere needs improved	There are too many physical activities	There should be a chance to try it by day	It needs better adverts	Significance level	n
All students	18	8	23	14	11	12	22		440
College A	19	8	12	22	6	24	13)	0.1	125
College B	17	8	28	11	13	7	25)		315

Every response category shows considerable differences between the colleges. College A students were of the opinion that they were not made welcome in certain clubs, but on the other hand they were aware of the many advertisements relating to the clubs in the college. College B students considered that they had too far to travel and that their college clubs were too biased towards physical activities. The significant difference between the colleges is primarily attributable to the large number of College A students wishing "a chance to try it by day". This response perhaps reflects their awareness of the breadth of activities available to full-time students on a Wednesday afternoon.

2.323 Desired changes in further education

Question 11 "What changes would you like to see made in your further education?"

(Percentages)

	Better student facilities	1 Change the mode of attendance	Make the course more relevant	Give the student more say	None	Scrap FE	Significance level	n
All students	41	34	28	30	14	4		440
FT & BR	55	12	16	33	15	3)	0.1	73
DR	38	38	30	30	13	4)		367
JR	36	43	29	22	10	5)		169
EI	37	33	29	35	19	3)	1.0	72
MEC	28	30	26	28	11	3)		152
CC	56	3	15	33	20	0)		39

1 This answer combines two common responses (a) "cut the hours" (b) "cut the course"

There are striking differences in responses to this question. FT and BR students, being in college for longer periods, felt keenly the lack of amenities, whereas DR students were not particularly happy with day release.

The differences within the courses are due to Joiners wanting the form of their courses changed, whereas the Caterers, mainly the girls, wanted better facilities for themselves, but were quite happy with the form of their course.

When considering the answers of all students however, no one of the four main grievances appears to be of such importance as to outweigh the others.

Summary

From the information received from the interviewees, a profile of these further education students can be constructed.

Students considered that the facilities of the colleges in question could be improved (2.301), although this is an area where it is doubtful if provision could ever catch up with expectations.

A Day Release form of course was generally accepted (2.302 - 2.304), although a majority of students seemed prepared to accept something more. Although the form of attendance seemed suitable, there was less enthusiasm for the individual subjects of their courses (2.305 - 2.309), and Liberal Studies aroused many unfavourable comments. In spite of their complaints these students saw further education as important for the opportunities it provides to pass examinations (2.319).

In addition, the answers to questions 2.311, 2.314 and 2.315 suggest that many of these students considered that if they were to gain the necessary practical expertise, attendance at college was the best means of doing this.

Particular groups of students deviated from the general profile in certain respects. The FT and BR students were particularly dissatisfied with the college facilities (2.301). Having more free time they were particularly anxious for good social and recreational facilities (2.311, 2.323). They were more in favour of practical work (2.305), because many of them were engaged on a course which combined training and education and was therefore highly loaded on the practical side. Many of these students were convinced that Day Release attendance is not enough (2.302).

Each course has its own particular profile. Joiners tended to like the subjects of their course, except Liberal Studies, (2.305 - 2.309), but they were less sure about the best form or length of attendance (2.303, 2.304 and 2.323).

Electricians disliked Theory but liked Liberal Studies (2.306, 2.309). They felt that theirs is "a job with a future" (2.317), and that certificates are important (2.312). These Electricians were the most enthusiastic of the students interviewed.

Many Mechanicals disliked their Practical (2.305), and this may be important since they were more anxious for personal satisfaction from college than for certificates. They were also distinguished by their better contacts with their Training Supervisors (2.315). It is of course easier for a Training Supervisor to oversee the apprentices in one factory than on a number of building sites. Mechanicals also tended to choose firms near home. This again may be a reflection of the size of engineering firms. A large firm in any district seems much more promising to a young man looking for employment than a number of small firms would. On the other hand, Mechanicals indicated fewer vocational ambitions (2.318), which may also be due to a feeling that in a large firm the prospects of considerable advancement are less.

Catering students enjoyed their Practical (2.305), perhaps because it is one craft which the colleges put to real use. These students also saw more value in Calculations (2.307), and were the group most anxious for promotion (2.318), but this was probably due to their awareness that for women the opportunities for promotion often come sooner. One objection that the female Catering student made was that college facilities were particularly unsuitable for them.

The only significant differences between Part 1 and Part 2 students, are that Part 2 students were perhaps more active industrially (2.315) and less anxious to be active in sport and leisure time activities (2.321).

The students of each college had different complaints. Compared with the College B students, the College A students considered their common rooms to be poorer (2.301), disliked Liberal Studies more (2.309), and were more anxious for better facilities for physical recreation (2.311). Compared with College A students, the College B students considered full time attendance to be more desirable (2.304), their practical instruction to be poorer (2.305, 2.311), and their opportunities for social activities to be fewer (2.321). It is however difficult to make meaningful comparisons between groups of students who have not experienced the others' facilities.

Comments

This chapter might be held to suggest that there are certain priorities for action in the further education field.

In any new colleges it is essential that the accommodation be made more flexible. At the moment too many colleges have been designed without taking into account the need of young people for activity. It is even worth considering whether the idea of "classroom" is sacred, especially for Liberal Studies.

The question of courses is also in need of revision. It seems that the City and Guilds of London Institute and the Industrial Training Boards are much too confident of industry's ability to give apprentices the training they need.

Mechanicals find that too many sub-skills are competing for a place on their course, but here the new '500' series of City and Guilds courses should do much to cure the grievance. Nevertheless, an outstanding problem will remain, that of final certificates. In most other trades, the successful student can aspire to a Full Technological Certificate and the rewards open to a holder of such a certificate. The Mechanical does not have this goal, and this oversight ought to be remedied in order to encourage the young Mechanical.

Another major problem is the atmosphere of the college. So long as Day Release is going to be the main form of attendance at college, then college administrators will have to find some way of involving their students in the life of the college, both formally and informally.

All in all, the craft apprentice at technical college is not the happiest of students, and the main improvement in his lot would seem to be to make greater use of his latent fund of enthusiasm.

References

Further Education and the Construction Industry - James Reilly (unpublished MEd thesis, University of Glasgow 1969)

CHAPTER 3

THE 1968/9 INTERVIEW RESULTS

1 Procedure

As described in Chapter 1, a random sample of the students interviewed in 1967/8 was interviewed again in 1968/9. The intention was to follow up a few of the interesting leads thrown up by the first interviews. On the second occasion, it was found difficult to interview a satisfactory number of the students in certain categories, and while this does not invalidate the results in general, it makes certain comparisons between groups impossible. Those interviewed totalled 232, 60 in College A and 172 in College B.

As in 1967/8, the interviews received considerable co-operation from the students. On the second occasion, the interview averaged twenty minutes. Within the structure of interview laid down, this proved to be a satisfactory time.

2 Presentation of results

Once more, the replies of all students will be reported on every question. The groups whose replies will be quoted in the event of statistically significant differences appearing are slightly different this time. As far as differences between colleges are concerned, the results for College A will be presented as a group, but the College B results will be presented in two forms:- (a) College B (W), which will be the replies of all students interviewed in College B; and College B (E), which will be the replies of the students of College B who are the counterparts of those interviewed in College A, namely those students in JR 3, JR 4, JR 5, MEC 3, MEC 4. In addition, a new comparison will be made between those students who were repeats or failures (and were therefore at the same stage as they had been in 1967/8), and those students who had passed an external examination in the interval. These last groups will be entered in the table as "R & F" and "P".

The groups which do not appear in the 1968/9 results are Full-time and Block Release students, and Part 1 and Part 2 students. The first of these is absent because there were no such students in the 1968/9 sample, as the Full-time courses were generally for first year students only, and the relevant Block Release course was discontinued in College A. The second is absent because, with the sample members being a year further on in their studies, the number in Part 1 had dropped considerably, and another fairly

large group had moved on to Part 3 of their course.

Once more the results for all these groups on all questions are presented as percentages, with an accompanying indication of the number of each group. Where there are multiple responses, account is taken of this in the χ^2 analysis.

3 The results

Question 1 "What do you think of each subject in relation to your work?"

3.301 Practical

	(Percentages)						
	Good	OK	Too easy	Not relevant	Not enough machine work	Significance level	n
All students	23	9	14	45	9		172
College A	37	7	13	29	14)	1.0	56
College B (E)	9	14	18	47	12)		43
College B (W)	16	9	15	53	7		116

About a third of all these students considered their Practical to be of value in their everyday work.

The students in College A were significantly more in favour of Practical whereas the students in College B were more likely to consider that what they got was irrelevant.

3.303 Theory

	(Percentages)				
	The most essential subject	Useful	Occasionally of help	Irrelevant	n
All students	30	31	20	19	231

It is satisfactory to notice the students' approbation of their theoretical studies. The differences from the 1967/8 results are possibly due to the students having progressed in their course. A number of teachers have commented that, at first, a student sees little value in Theory but, as he progresses through his trade, it becomes more meaningful to him.

3.303 Calculations

(Percentages)

	Useful	OK	Too complex	Irrelevant	n
All students	21	32	19	28	130

There was still a sizeable minority of students who saw little use for the sort of calculating they were asked to do in college.

3.304 Technical Drawing

(Percentages)

	Useful	Only need to read drawings	OK	Never used	Too advanced	Significance level	n
All students	19	25	11	27	18		114
JR	20	16	12	30	22)	1.0	82
MEC	19	50	6	19	6)		32

On the occasion of the second interview many students suggested that the level to which the college pursued Technical Drawing was too advanced for their needs. Many of the students who held this opinion said in the first interview that the Technical Drawing was too easy. It would seem that, on certain courses, when the Technical Drawing is taught to the elementary level laid down by City and Guilds, it is considered to be too easy; but when at another stage the teacher takes the study of this subject beyond what is laid down in the syllabus, it is considered to be too advanced!

3.305 Science

(Percentages)

	Useful	OK	Irrelevant	Too advanced	n
All students	27	22	28	23	111

Again this was one of the less popular subjects.

3.306 Liberal Studies

(Percentages)

	I like it	Useful	OK	Bad	Rotten	Not liberal enough	n
College B (W)	23	9	20	2	40	6	161

On this occasion, only the results of College B have been presented, because only one of the classes in the sample from College A had a Liberal Studies period.

The result shows that there was still a really strong section of the student body who had no time for the Liberal Studies they received.

3.307 The further education course being followed

Question 2 - "What do you think of your course as a whole?"

(Percentages)

	Good	OK	Day Release is not enough	Work is better	Significance level	n
All students	46	32	4	18		231
JR	54	21	3	22)		89
MEC	26	49	8	17)	0.1	80
EI	62	30	0	8)		47
CC	62	19	7	12)		15

Two interesting points emerge from the answers of all students to this question. Firstly, in spite of their criticisms of particular parts of their courses, students were willing to accept that coming to college did them some good. Secondly, although in the first interview the FT and BR students thought that Day Release was not enough, having now finished with that form of attendance, they considered that Day Release is satisfactory for the rest of the course. One might conclude that students feel that a measure of Full-time or Block Release education is not undesirable, but that it should not last for the whole course.

Within the overall picture there are significant differences between courses. While Mechanicals were only prepared to go as far as to say that the course might do, the Caterers and particularly the Electricals were substantially in favour of their courses.

3.308 Suggested changes in courses

Question 3 - "What changes would you like to make in your course?"

(Percentages)

	Good as it is	Allow more time	Omit part of the course	More Theory	More "real" work	Significance level	n
All students	27	8	16	9	40		232
JR	32	6	27	6	29)		89
MEC	23	10	7	16	44)	1.0	80
EI	22	3	10	6	57)		48
CC	46	7	20	7	20)		15
R and F	22	6	6	3	63)	1.0	34
P	36	7	22	12	23)		70

It is worthy of note that in spite of the large number of students who considered their course "good" in reply to question 2, a number of these could think of ways of making their course even better. This helps to explain why 46% thought that their course was good in Question 2, but only 27% in Question 3. The students' suggestion that work in the college should be made more realistic had been noted in the previous interview (2.305), but it is even more strongly underlined in this set of interviews, especially by Electricians, whose course was heavy on the "classroom" side. Apart from the topic of "realism", the courses also differed on matters of time. Joiners, whose day invariably lasted until after 6 pm,were the most anxious to see parts of the course omitted whereas some Mechanicals, most of whom finished at approximately 5 pm, would consider additions to their course. It would be of interest to pose the same question to Mechanicals now engaged on one of the new '500' series of City and Guilds courses where the allocation of time is greater.

There are also significant differences on this question between the unsuccessful and the successful groups. Those who had passed their examination felt that the course could be shortened. Those who were repeating or had failed would have preferred the course to be more like "real" work.

3.309 Student Ambitions

Question 4 - "What are your ambitions in work?"

(Percentages)

	To get promotion	To be good at the trade	None	To leave the trade	To make money	n
All students	39	32	16	6	7	232

3.310 Reasons for attending college

Question 5 - "What good do you think coming to college does?"

(Percentages)

	You get certficates	You get experience	You get what you miss at work	No good	n
All students	15	39	32	14	231

The answers to Question 4 and 5 are fairly closely related. Many of the students realised very well that a good performance at college helps in their careers and since generally it is the more ambitious who persist at college, then those who persist felt that there were definite advantages in coming to college.

3.311 Industrial Training

Question 6 - "What kind of training do you get from your firm?"

	(Percentages)					
	I do one job only	I move round the depts	I do various jobs	I move with the men	I am on my own	n
All students	6	9	3	43	39	232

There were still only a few students who were conscious of following any well-defined training programme at their work.

The thesis by James Reilly[1] has a similar question which again tends to corroborate these findings. The categories of Question 6 can be made to conform to Reilly's, giving the following comparisons:-

	I follow special training programme	I work to the foreman's demands	I spend weeks on the same job
Reilly	6.8%	80.5%	12.7%
C for C JR	4.5%	83.1%	12.4%

3.312 Supervision of training

Question 7 - " How is your training supervised?"

	(Percentages)				
	By tradesmen	By a supervisor	By no one	Significance level	n
All students	54	27	19		232
JR	60	22	18)		89
MEC	44	33	23)	0.1	80
EI	73	6	21)		48
CC	13	73	14)		15

Young apprentices still seemed to have to depend on the tradesmen in their firm for any training they received. There are, however, considerable differences between trades, due mainly to the organisation of the various industries. Many Electricians, working as they do for small electrical contractors, tend to spend most of their time in the company of one tradesman, whereas Caterers tend to work in an organised kitchen, closely supervised or advised by a chef or kitchen supervisor.

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1 op cit

3.313 Spare time interests

Question 8 - "What are your spare time interests?"

(Percentages)

	Sports	Youth clubs	Hobbies	Dancing	Girls	Staying in	Social
All students	71	13	34	41	26	19	24
College A	71	12	22	25	23	18	12
College B (E)	66	23	49	43	34	17	43
College B (W)	70	13	38	46	27	19	28

	Drink	Study	Significance level	n
All students	21	4		232
College A	13	8)	1.0	60
College B (E)	13	2)		47
College B (W)	23	3		172

Where the categories are comparable with the 1967/8 results there are no large differences except over "Youth clubs", where the percentage has dropped from 21% of all students to 13%. This is probably due to the falling off in interest in youth clubs after the age of 17, a trend commented on in a number of reports[1].

There is a significant difference between the colleges over "Hobbies". Many of the students of College B live at some considerable distance from large-scale social and recreational facilities, which probably encourages them to find alternative sources of leisure-time interests.

3.314 Friendships

Question 9 - "How did you meet most of your present friends?"

(Percentages)

	At school	At work	By living near them	Through social activities	Through youth clubs	n
All students	44	25	22	35	6	232

As one might expect, most of our students, having spent the largest part of their lives to date in school, found that to be the largest source of friendships.

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[1] Time of One's Own (Table 24) - Pearl Jephcott (Oliver & Boyd 1967)

3.315 Emigration

Question 10 - "Are you considering emigrating?"

(Percentages)

	Yes	No	Perhaps	Probably	I wish only to travel	n
All students	35	42	11	2	10	232

Whether these are definite decisions or only youthful fantasies could only be tested by a follow-up study some years hence.

3.316 Reasons for desiring to emigrate

Question 11 - "Why do you wish to emigrate?" (answered by those responding "Yes" to Question 10)

(Percentages)

	For money	For adventure	For a change of government	For family reasons	For more opportunities	n
All students	37	11	10	9	33	81

One could conclude from this that 70% of our respondents considered that there were greater opportunities for making money or gaining advancement outwith the British Isles. The trend among skilled and professional people to leave Scotland is well documented, and these people seem likely to continue the trend.

3.317 Average earnings

Question 12 - "What is your average weekly pay (net)?"

		n
£14+	JR 4, 5	24
£13+		
£12+		
£11+	MEC 4, 5	36
£10+	JR 1, 2, 3	47
£9+	MEC 1, 2, 3	30
	EI 1, 2, 3	32
£8+	CC	15

On such relatively small numbers, any analysis would be likely to be unprofitable. One or two interesting observations can nevertheless be made.

It has previously been noted that there is some reluctance among Joiners to attend college. Since much of their relatively high earnings is due to

bonus payments, which are considerably cut when they attend college, this is one explanation of their view that a reasonable incentive to learning would be to guarantee them their average earnings when they are attending college. Caterers are relatively poorly paid largely because most of them are women, and also because there are few of the opportunities which other trades have of supplementing their earnings by working overtime, or doing private jobs in their own time.

3.318 Desired changes in college spare time activities

Question 13 - "What changes would you make in the college's out-of-class activities?"

(Percentages)

	Leave as they are	Provide more during day	Make clubs more open	Allow more free choice	I'm not interested	Too far away	Significance level	n
All students	25	8	6	15	30	16		222
College A	37	18	13	12	20	0)	1.0	60
College B (E)	30	2	2	13	28	25)		47
College B (W)	21	4	2	17	34	22		162

Only 29% of all these students had a definite suggestion to make for improving the colleges' out-of-class activities. Since we are dealing with technical colleges which draw students from a wide area, the lack of interest shown by many students is not necessarily an indication that there is something wrong with these colleges.

There are considerable differences between the colleges. It is certainly true that the students of College B come daily from further afield, but it is possible that to claim you live "too far away" is the most available excuse for lack of interest. College A has a large full-time student population which is particularly active in advertising and conducting a very wide range of activities. Also the full time students of College A have an afternoon free to take part in extra-curricular activities. Perhaps these two facts help to explain the replies made by our College A craft students.

3.319 Desired additional interests

Question 14 - "Are there any other spare time activities you would like to take part in?"

(Percentages)

	Nothing	Sport	Hobbies	Social Activities	Travel & Outdoors	Making money	Study	n
All students	45	19	13	11	7	2	3	228

These answers show a number of slight variations from the answers to Question 10a in 1967/8. At the second interview, an additional 8% of the students were satisfied with their present interests. As they were now older 15% fewer wanted to take part in additional sports, but 3% comprised a new category who saw the need to do more studying.

3.320 Changes of employment

Question 15 - "What would make you change your job?"

(Percentages)

	I am happy	For some variety	For more money	For more security	For a better job	n
All students	59	4	15	6	16	227

Although so many had no wish to change jobs, it is worthy of note that many of those who made this reply said in addition "After spending so long learning a trade, I don't want to throw it all away".

Of those who could think of a better job, there was a wide range of desires from "I want to be an ice cream man" to "I want to be an architect", with the most popular being "I want to be a professional footballer".

3.321 Long term aspirations

Question 16 - "What plans have you made for your life?"

(Percentages)

	To have a steady job	To get promotion	To move around	Personal	None yet	Significance level	n
All students	12	44	21	5	20		230
College A	5	31	19	10	42)	1.0	59
College B (E)	11	61	6	2	20)		46
College B (A)	14	49	22	3	13		171

The pattern of responses is slightly different from questions asked previously on "Ambitions", and it is possible that in this case the students did

not make any long-term plans.

The significant differences between colleges are surprising. One tentative explanation is that the students in College A came from larger firms, and to them the very size of their firm made their chances of promotion seem more distant, leaving them less sure of what to aim for.

3.322 Desired changes in further education

Question 17 - "What changes would you like to make at college?"

(Percentages)

	Better facilities	Change the mode of attendance	Make the courses more relevant	Give the students more freedom	None	Significance level	n
All students	38	21	13	21	19		252
JR	43	26	7	15	20)		89
MEC	24	18	20	31	20)	1.0	80
EI	50	19	12	21	12)		48
CC	40	13	13	7	33)		15
R and F	21	35	26	15	21)	0.1	34
P	41	9	11	23	20)		70

There are differences between these responses and those noticed in Question 11 of 1967/8. Being older, the students had become more accustomed to Day Release and were less inclined to say that their course was irrelevant. The significant differences noted are due to Joiners still being unhappy with their mode of attendance, while the Mechanicals felt the college a bit restrictive. Significant differences also appear between successful and unsuccessful students. Successful students, having passed an examination, were not really concerned about the form or relevance of the course. Many of them had switched their attention to wishing better facilities. Many of the unsuccessful students, on the other hand, would have liked to blame the relevance of the course and its mode of attendance for their failure. Their comments on mode of attendance generally indicated a belief that the course or day of attendance were too long.

3.323 Student participation in college life

Question 18 - "What share do you think students should have in running the college?"

(Percentages)

	We don't know enough to interfere	The present system is fine	All we need is a student adviser	Staff/ Student committees	Full say only on clubs & facilities	More say on course content	n
All students	15	6	17	18	30	17	230

Most students were reluctant to be drawn on this question. Their general feeling was that "student power" might be all right for the universities but not for technical colleges. What they could commit themselves on was the need for more consultation. There was a strong body of opinion which felt that there must be more consultation between the authorities and the students.

Summary

It must be borne in mind that there were no first-year students interviewed on this occasion, so that the sample is slightly "top-heavy".

Nevertheless a profile of student opinions can be constructed. On the occasion of the second interview, the subjects of the course were viewed more favourably (3.301 - 3.306), with the Theory part of each course being particularly welcomed.

Regarding the whole course, the students recognised value in it (3.307), but, when pressed to suggest changes in that course, many students repeated the objection that Practical in college was not realistic enough (3.308).

The advantages of coming to college are seen in the answers in tables 3.309 and 3.310 where the students expressed a desire to do well at their trade, perhaps even well enough to be promoted, and recognised that the experience and certificates gained at college are very helpful to these ends. This need for college is reinforced when the answers in tables 3.311 and 3.312 are examined. These suggest that industry had still not made progress in reorganising its apprentice training, and therefore apprentices still depended a great deal on their college, even for training.

Our students had a variety of spare-time interests, many of them carried on from schooldays with school friends (3.313, 3.314). They were reasonably contented with these interests and saw little reason for the college to intrude any further into their spare time.

The students interviewed had a wide range of earnings, but it is suggested that many of them would have liked to be even better off, and saw emigration as one way of achieving that aim (3.315 - 3.317).

On the employment side, most of the apprentices were content with their present trade and wanted to do well in it (3.320). To make their stay at college more profitable, they particularly desired better facilities (3.322), and more cooperation with the college authorities (3.323).

There were a number of areas where the two colleges differed in opinion. On the whole the students of College A felt better served on the practical side of their course (3.301). On the social side, however, they felt that their college could have done more to cater for day release craft students (3.318).

The students of College B felt very badly served in their practical classes (3.301). On the social side, they found it more difficult to make time for their college (3.313), and, in any case, many of them were fully engaged with personal hobbies. College B students also differed from their College A counterparts by having more firm long-term plans (3.321), mentioning particularly their desire for promotion.

There are one or two points on which the individual courses also showed differences. Joiners would have liked more of their course to be like "real" work (3.308), and less technical drawing (3.304). A considerable number of them would also have liked their day at college shortened (3.322). The Mechanicals felt that the course was reasonable (3.307), but felt it must be made more like work (3.308). For some reason, the Mechanicals also felt in need of less discipline in their colleges (3.322). The Electricals thought that their course was good (3.307), except for the proviso that too much of their time was spent in the classroom, and they would have prefered some workshop activities (3.308). In their training, Electricians were particularly dependent on their tradesmen (3.312). On the results of this series of interviews, the Caterers came out as the most satisfied of all students. They liked their course (3.307, 3.308), and they saw little need for drastic changes in their colleges (3.322), except to ask for better facilities particularly for female students.

There are two areas of difference between the "failures" and the "successes". Those who were still at the stage of the course which they sat in the previous session would blame their lack of success on the lack of relevance of realism of their course (3.308), and also on the day release form of attendance (3.322). Those who had passed their examinations were now less concerned about the course (3.308), and more anxious that their stay at college be as short and as comfortable as possible (3.322).

Comments

This second series of interviews further strengthened the conviction that many students still lean very heavily on College instruction to become competent in the practical part of their craft. The only problem left to the college where there are courses with a practical content is how to make this practical more meaningful. The students interviewed suggest that they should be given real tasks in the college. The Electricals could do college maintenance, the Joiners could make furtniture and the Mechanicals could produce many of the necessary tools. The only students who have no problem here are the Caterers, because most colleges run their own restaurant. If it seems so natural to allow it for Caterers, then it should be possible to find outlets for other courses too.

The other area where decisions must be taken is "facilities". Students cannot be expected to show respect and cooperation in dining halls, common rooms and evening recreation unless they are given a fuller share in the planning and running of these facilities. Both colleges will reply that they already have Students' Associations, but it is the Research Officer's experience that in neither college is the Association making the necessary contact with the day release craft student. What is needed is to have many more channels of communication so that the real views of students are received and not the views of the unrepresentative minority who form the student leadership. One positive suggestion which can be put forwa·d is that the staff of technical colleges must be involved more in these matters, either as a corporate body, or through one of their members whose duty it would be to act as Student Adviser.

References

Further Education and the Construction Industry - James Reilly (unpublished MEd thesis, University of Glasgow 1969)

Time of One's Own - Pearl Jephcott (Oliver & Boyd 1967)

CHAPTER 4

THE ANALYSIS OF QUESTIONNAIRE RESULTS

All the data from the various questionnaires (Appendices A and A2, B and E) were coded on punch cards and submitted to various forms of statistical analysis using routines devised and carried out by Mr R Middleton and Miss P Ballam of the Edinburgh Regional Computing Centre.

Although complete information was available only on 977 students who had been contacted in both years of the project, considerable information was available for a total of 2140 students who were contacted at one time or another. The number of observations recorded on each variable will depend on factors such as the student being present when the questionnaires were being administered, on his willingness to answer individual questions, and on the relevance of certain questions to his own situation. When the results are discussed, the number of observations recorded (n) will be quoted where relevant, and the significance level indicated by χ^2 or 't' analysis will be given.

The method used in constructing the Multiple Choice Questionnaire is described in Appendix E.

In all, 82 separate pieces of information were available and these are detailed in Appendix F. The variables used in this chapter are as follows:-

List of variables used in questionnaire analysis

Variable	
1	Type of attendance in Year 1 of project
2	" " " 2 "
3	Course attended
4	Year of attendance in Year 1 of project
5	" " " 2 "

List of variables used in questionnaire analysis (cont'd)

Variable	
16	Age at 1/1/68
17	Age at 1/1/69
18	Size of student's home area in Year 1
19	" " " " " " " 2
20	Proximity of student's home area to college in Year 1
21	" " " " " " " " 2
22	Type of secondary school attended
23	Year of secondary schooling completed
24	Number of O grades held
25	" " H " "
26	Size of family
27	Position in family
28	Father's occupation
29	Relationship of father's occupation to student's
30,31	Year of apprenticeship
32	Number of firms worked in
33	Number of trades worked at
50	Sex
51,52	Marital status
53	Type of secondary school attended
54	Progress between Years 1 and 2 of project
55	Whether indentured or not
56	Whether this is desired job
57	If not, what is
58	Desire to have choice in Liberal Studies
67,76,78,79,82	Responses to Section C of Appendix E. (leisure time interests)

In this chapter, the variables concerning matters of fact will be discussed, while subsequent chapters will deal with variables where the students' opinions are concerned, and the relationships of the Attitude Scale with other variables.

1 A background picture of "all students"

While it is not claimed that the students chosen for inclusion in the project are representative of all craft students, they are a reasonable cross section of craft students in the industrial belt of Central Scotland. It is therefore of some advantage to quote briefly the information given in the Personal Questionnaires.

A description of the students by mode of attendance, year of attendance and course attended is to be found in Chapter 1. In terms of age, marital status and sex, the students were distributed as follows: 99% were aged between 15 and 21, 4% were married, 7% were female. (Variables 16,17,50 to 52.)

When considering the students' homes and home areas (Variables 18 to 21 and 26 to 29), we find that 31% of the sample lived in population areas of more than 100,000, 9% in areas of 25,000 to 100,000, 13% in areas of 10,000 to 25,000, 35% in areas of 1,000 to 10,000 and the remaining 12% in areas of settlement of less than 1,000 population. In terms of family size and position in family, 11% were only children, 27% had one brother or sister, 25% had two, 17% had three and 20% had four or more brothers or sisters. The average family size was 3.3 children. For position in family, χ^2 analysis shows the sample to exceed chance representation of first and second born, with 44% being first born and 31% being second born.

79% of the fathers of sample members were in manual occupations, and 88% of them were in the Registrar General's Classes 3,4 and 5.[1] 49% of all fathers were in Class 3 manual. Of the sample members, 6% were in the same occupation as their father, and 11% were in the same firm.

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[1] The Registrar General's Social classes are as follows:- 1 Professional etc, occupations, 2 Intermediate occupations, 3 Skilled occupations, 4 Partly skilled occupations, 5 Unskilled occupations.

Information about schooling was available for 1872 students, (Variables 22 to 25). 11% of them had attended senior secondary schools, 42% had attended comprehensives and 47% had attended junior secondaries, while 38% of sample members had remained at school beyond the minimum leaving age. These figures can be compared with the 22% in senior secondaries, 44% in comprehensives, 34% in junior secondaries and 50% staying on, quoted in Scottish Educational Statistics 1968. 76% of the students had no "O" grade passes and 99% had no "H" passes. 11% however, had 3 or more "O" grades which might suggest that they were drawn from the top 30% of their age group and were capable of more advanced courses.

In considering the sample in occupational terms (Variables 30 to 33, 55 to 57) we find that 1% were continuing at college having finished their apprenticeship. This generally means they had previously lost a year through failure at some part of the course. Of all the students, 78% had their apprenticeship and course in step. It is common to find students whose course year and apprenticeship year are out of step, and as is reported elsewhere, many students leave college because their apprenticeship finishes before their course does.

Changes of employment and occupation were other contributory reasons for students "getting out of step". 74% of the total group were in their first job and 87% were in their first trade. This stability is perhaps a little illusory as 13% of those interviewed indicated that a trade was only something to fall back on and they would leave the trade at the end of their apprenticeship.

The students were equally split between those who said they were indentured and those who were not. While in terms of job choice three quarters said they were in the job they had wanted on leaving school, 12% had wanted a different trade, and 6% had wanted a better job.

One considerable disincentive that some students mentioned was the length of the college day, lengthened considerably by the time involved in travelling. Variables 20 and 21 touched on this fact and reveal that 72% of the sample attended the college of their local authority. Of the remainder, 25% did not attend their nearest college, half of them because their employer

was in another college's area and wished all his apprentices to attend one college, and the other half because their own college did not offer the course they needed, while the remaining 3% crossed into another authority because their own had no college.

From the Multiple Choice Questionnaire certain matters of fact concerning club membership and leisure activities may conveniently be quoted at this point (Variables 67 to 76, 78, 79 and 82). From the replies of the 1536 students answering this section we note that 42% belonged to no clubs and only 7% belonged to more than two clubs. Of the 1400 different club memberships mentioned, 37% were of organisations such as YMCA, Boys' Brigade, Scouts, 27% were sports clubs and 36% were social clubs. In addition, 2% of our respondents claimed to be involved in no leisure activities, but 66% claimed three or more spare time interests. The average figures for club memberships and spare time interests were 1.5 and 3.5 respectively. Almost without exception the students did not identify with the college for their spare time interests. Only 2.6% of all the respondents attended a college activity regularly and a further 3.5% attended one occasionally. The evidence available on clubs and activities is similar to the findings of the Crowther Report "15 to 18"[1], and the Schools Council Enquiry 1 "Young School Leavers"[2].

2 Difference between colleges

There were no differences between the colleges in relation to students personal and home circumstances except that, naturally enough, the students attending city colleges (Colleges A & C) were mainly drawn from larger centres of population.

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1 Crowther Report "15 to 18" Part II Social Survey Tables 28,30(a). HMSO 1960

2 School Council Enquiry 1 "Young School Leavers" HMSO 1968
Tables III 3.6, III 3.13

There is a significant difference with regard to school variables.

4.21 Year of leaving secondary school

V23 Year of leaving secondary school

	(Percentages)			
	3rd year leavers	4th and 5th year leavers	n	Significance level
College A	84	16	543	
College B	50	50	1079	
College C	84	16	159	0.1
College D	38	62	85	

There are a number of different routes taken by school leavers prior to entering City and Guilds courses. Among these are fourth year vocational courses in schools, pre-apprenticeship courses in college, work in menial jobs for a time before entering apprenticeships or taking SCE courses at school but deciding to terminate these after "O" grade. The information available in this project simply divides students into those who left school at the end of 3rd year and those who did not. In view of the other ways in which school leavers could be divided, the statistical significances indicated in connection with V23 must be viewed with some doubt.

From the information available it is not possible to split the sample into these various routes for comparison purposes. It has been possible only to compare those students who left school at the end of 3rd year and those who did not. It is necessary therefore to treat the significance of Table 4.21 with some caution.

4.22 Types of club membership

V's 68 to 71 Students' club memberships

(Percentages)

	Voluntary Youth	Sports	Social	n	Significance level
College A	24	31	45	318	
College B	42	25	33	708	0.1
College C	35	26	39	244	
College D	57	21	22	76	

In the county areas, voluntary youth organisations are prominent among the few clubs young people can attend. City dwellers, on the other hand, have a wider choice.

3 Difference between courses

It has already been noted that 93% of our students were male and 7% female. In fact all the courses were exclusively male with the exception of Catering where 43% of the students were female.

A number of significant differences are found between the students following the various courses.

4.31 Fathers' occupations graded by Registrar General's classification

V28 Level of occupation

(Percentages)

	RG1 and 2	RG3 (non-manual)	RG3 (manual)	RG4	RG5	n	Significance level
EI	11	4	48	24	13	225	
JR	9	6	47	24	14	431	
MEC	10	7	53	24	6	702	0.1
CC	30	9	37	20	4	190	
FEC	4	4	53	24	15	94	

In the area of home background the courses differ significantly with regard to father's occupational status. Without placing too much emphasis on these figures they indicate that Catering particularly is regarded as a "reputable" trade amongst parents of higher socio-economic status, with even 27% of the male Caterers having fathers in RG1 and 2 occupations, whereas Fabrication Engineering is perhaps a low status trade.

4.32 Year of leaving secondary school

V23 Year of leaving secondary school

	(Percentages)			
	3rd Year leavers	4th and 5th year leavers	n	Significance level
EI	38	62	261	
JR	84	16	480	
MEC	50	50	780	0.1
CC	72	28	225	
FEC	83	17	125	

The comments made regarding the results of Table 4.21 also apply to this table and the statistical significance obtained should be treated with caution.

Information available from Catering students shows that even those whose parents were placed in RG1 and 2 were likely to have left secondary school at the end of the 3rd year, the actual incidence being 67%. Several research studies suggest that having parents in high status occupations usually implies continuing at school. The recent SCRE publication 62, "A Study of Fifteen-Year-Olds"[1], comments "the sons and daughters of the professional and non-manual workers and of the skilled manual workers tended to remain at school for at least a further year."

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1 "A Study of Fifteen-Year-Olds (SCRE Publication 62, University of London Press 1971, page 109)"

This study suggests, however, that certain occupations are accepted by such parents as being a suitable reason for allowing their children to leave school.

4.33 SCE Performance

V24 Number of "O" grades held

	(Percentages)				
	None	1	2	3+	n	Significance level
EI	68	7	7	18	206	
JR	91	3	4	2	327	
MEC	70	8	8	14	752	0.1
CC	79	5	7	9	264	
FEC	88	5	4	3	110	

These results could be interpreted as a reflection of the relative technical complexity of these various trades. The figures also show that Mechanical and Electrical students had the best SCE record, Joiners and Fabricators the worst, while the Caterers held an intermediate position.

4.34 Changes of employment

V32 Number of firms worked in

	(Percentages)				
	1	2	3+	n	Significance level
EI	74	18	8	255	
JR	68	24	8	475	
MEC	82	14	4	797	0.1
CC	76	19	5	161	
FEC	66	22	12	67	

Mechanicals made fewest changes of firm, perhaps because they work in larger firms where there are opportunities to change job without changing firm. In addition the Mechanical Engineering course was designed as a broad course embracing many sub-specialisms within engineering.

4.35 Popularity of different trades

V56 Job Choice

	(Percentages)				
	I wanted this job	I wanted another job	I was uncertain	n	Significance level
EI	77	21	2	188	
JR	74	24	2	322	
MEC	71	26	3	729	0.1
CC	83	16	1	257	
FEC	43	54	3	112	

Their answers to the question on job choice provide another indication of the relative popularities of the different trades.

In their answers to the questions on clubs and activities the only significant difference which showed up was between Caterers and others. The Catering students averaged less than one club membership each, while other students averaged nearly two club memberships each.

The evidence available from interview responses indicates that the involvement of Caterers in club activities is less, because their working routine makes it difficult for them to lead an ordinary social life.

4 Differences between the successes and the failures

From the data available it has been possible to draw comparisons between various sub-groups: those passing and failing Part 1 examinations, those passing and failing Part 2 examinations, those leaving further education and those staying in further education over the two years of the project.

In analysing the evidence available on the "passes" and "failures" two alternative methods of presentation suggest themselves, (a) the group is split into passes and fails and the entries in the tables are presented as percentages of the "pass" or "fail" group, or (b) the group is split according to the rating on the variable and the entries in the table are

presented as percentages of these ratings. The nature of analysis is such that each method would present a different picture. The table which seems most illuminating is offered.

Due to missing information on certain variables, the reader will note that the numbers in each table fluctuate.

The absolute numbers of "passes" and "failures" were as follows:-

Part 1 - passed 192, failed 96
Part 2 - passed 84, failed 90

The attitude scale indicated certain differences at the Part 1 stage. The additional information throws more light on these differences.

4.41 Father's occupation graded by Registrar General's classifications

V28 What is your father's job?

(Percentages)

	Part 1 Students Passes	Fails	n	Significance level
RG1 & 2	100	0	24	
RG3 nm	100	0	11	
RG3 m	67	33	141	0.1
RG4 & 5	57	43	86	
All	68	32	262	

This table indicates that the higher up the Registrar General's classifications a student's father was placed, the more likely was the student to pass a Part 1 examination. The broad distinction which could be drawn is that students whose fathers were in non-manual occupations were much more likely to pass the Part 1 examination than those whose fathers were in manual occupations.

4.42 Type of secondary school attended

V22 Types of secondary school

(Percentages)

	Senior Secondary	Compre-hensive	Junior Secondary	All Students	Significance level
Part 1 passes	100	61	66	68	
Part 1 fails	0	39	34	32	0.1
All students (n)	31	117	142	290	

4.43 Year of leaving secondary school

V23 Year of leaving secondary school

(Percentages)

	Part 1 students			
	Passes	Fails	n	Significance level
3rd Year leavers	57	43	198	
4th Year leavers	81	9	90	0.1
All students	68	32	288	

These tables indicate that craft apprentices with senior secondary schooling or those who stayed on at school after the end of their third year were less likely to fail Part 1 examinations.

4.44 Relationship between year of apprenticeship and year of course

V30 Year of apprenticeship at time of examinations

(Percentages)

	Part 1 students			
	Passes	Fails	n	Significance level
Presented in due year	74	26	208	
Presented late	53	47	81	0.1
All students	68	32	289	

Part 1 examinations are taken in either the 2nd or 3rd years of further education, but of those unsuccessful at the Part 1 stage, 58% had been apprenticed for longer than these two or three years.

4.45 Changes of employment

V32 Number of firms worked in

(Percentages)

	Part 1 students Passes	Fails	n	Significance level
1 Firm	76	24	205	
2 Firms	55	45	66	
3 or more firms	31	69	16	0.1
All students	68	32	287	

Change of firm is another distinguishing feature between successful and unsuccessful Part 1 students.

One important comparison which could not be made at previous stages of the project was that between Part 2 passes and failures. Many differences have been pointed out for Part 1 students but it is obviously of importance to investigate whether the Part 2 stage also revealed differences.

4.46 Year of leaving secondary school

V23 Year of leaving secondary school

(Percentages)

	Part 2 students Passes	Fails	n	Significance level
3rd Year leavers	39	61	90	
4th Year leavers	58	42	84	1.0
All students	48	53	174	

4.47 SCE Performance

V24 Number of "O" Grades held

(Percentages)

	Part 2 students Passes	Fails	n	Significance level
Holders of no "O"'s	56	44	80	
Holders of some "O"'s	85	15	20	1.0
All students	62	38	100	

4.48 Relationship between year of apprenticeship and year of course

V30 Year of apprenticeship at time of examinations

(Percentages)

	Part 2 students Passes	Fails	n	Significance level
Presented in due year	55	45	141	
Presented late	19	81	32	0.1
All students	49	51	173	

Like their Part 1 counterparts, Part 2 failures tended to have less secondary education and to be attempting the Part 2 examination later than normal in their apprenticeship probably through previous failure or changed employment.

There were therefore fewer differences at the Part 2 stage, although it is worthy of note that 85% of those holding "O" Grade passes were successful at the Part 2 stage. Unfortunately the number of students contacted at the Part 2 stage is rather small.

Those who left further education without completing their course were also compared with those on the same courses who continued. One significant difference can be observed.

4.491 Persistance in FE attendance

V23 Year of leaving secondary school

	FE stayers			FE leavers			All students		
	3rd year school leavers	4th year school leavers	Total	3rd year school leavers	4th year school leavers	Total	3rd year school leavers	4th year school leavers	Total
1st Year college	112	80	192	25	5	30	137	85	222
2nd Year college	227	85	312	46	7	53	273	92	365
3rd Year college	183	100	283	85	16	101	268	116	384
4th Year college	39	43	82	29	8	37	68	51	119
All students	561	308	869	185	36	221	746	344	1090

4.492 Percentage drop-out by year of leaving school and year of college attendance

V23 Year of leaving secondary school

	FE leavers		
	% of 3rd year school leavers who were FE leavers	% of 4th year school leavers who were FE leavers	% of all students who were FE leavers
1st Year college	18	6	14
2nd Year college	17	8	14
3rd Year college	32	14	26
4th Year college	43	16	31
All students	25	10	20

The legend in the left hand margin relates to the year of the college course which students were attending in 1967/68. Those classed as FE "leavers" were those students who did not attend college in 1968/69.

At all stages there are significant differences between the 3rd and 4th Year school leavers with respect to their continuing in FE. Irrespective of the length of their secondary schooling, students tended to be more prone to discontinue their further education after three years, which is often the time by which they have passed their eighteenth birthday and there is less pressure on their employers to continue sending apprentices to college. Of those who did drop out after three or four years about 40% had at least a Part 1 certificate.

It is clear that those who leave secondary school early run a greater risk of also leaving college early.

5 Differences between year groups

In these comparisons the students have been classified according to the year of the course they were attending in the second year of the project. For first year students, only those attending on a day release basis have been counted since the following section contains a comparison between modes of attendance.

4.51 SCE Performance

V24 Number of "O" Grades held

	(Percentages)					
	None	1	2	3+	n	Significance level
1st Year of course	73	5	8	14	281	
2nd Year of course	85	5	7	3	310	
3rd Year of course	81	7	5	7	449	NS
4th Year of course	81	7	6	6	267	
5th Year of course	79	9	4	8	47	

Comparisons made on the basis of schooling gave few leads because of two conflicting trends, which cancelled each other out. On the one hand, the percentage of an age group staying on to a fourth year and attempting "O" grade has been rising and therefore we would expect a first year FE group to have more fourth year and "O" grade members than a fifth year FE group, while on the other hand, those who survive to their fifth year in FE tend to be those who were more successful at secondary school.

4.52 Changes of employment

V32 Number of firms worked in

	(Percentages)				
	1	2	3+	n	Significance level
1st Year of course	85	12	3	219	
2nd Year of course	72	20	8	220	
3rd Year of course	77	19	4	431	NS
4th Year of course	75	19	6	246	
5th Year of course	88	6	6	53	

The same is true of the industrial variables, since it seems that stability in occupation is associated with continuance in FE. The figures for number of jobs are again almost identical for first and fifth year groups.

4.53 Indenture agreements

V55 Are you indentured?

(Percentages)

	Yes	Don't know	No	n	Significance level
1st Year of course	26	11	[illegible]	261	
2nd Year of course	43	4	5	300	
3rd Year of course	59	2	39	437	0.1
4th Year of course	63	1	37	262	
5th Year of course	64	0	36	51	

Only on indentures are there significant differences, and it is hardly surprising that the percentage indentured rises through the year groups to reach a peak of 64% of fifth year respondents claiming to be indentured.

In Chapter 5 differences between year groups on the questions relating to attitude and opinion are indicated.

6 Differences between modes of attendance

At the first interview stage some FT and BR groups were available and comparisons were therefore drawn between the various modes of attendance. Similarly, various FT and BR groups responded at the questionnaire stage and comparisons have been drawn between them and their DR equivalents.

4.61 Year of leaving secondary school

V23 Year of leaving secondary school

(Percentages)

	3rd year leavers	4th and 5th year leavers	n	Significance level
DR	49	51	169	1.0
FT & BR	31	69	128	

4.62 SCE Performance

V24 Number of "O" Grades held

	(Percentages)					
	None	1	2	3+	n	Significance level
DR	73	5	8	14	281	1.0
FT & BR	55	8	11	26	177	

The firms which send apprentices to FT and BR courses are big firms who may be able to select from a large applicant group. They seem to have a slight preference for those with fourth year and "O" grade experience. One small additional difference between the groups is that FT and BR students are generally new to employment whereas 10% to 15% of first year DR students have had some other industrial experience.

Summary

From the factual details available in this chapter a picture of the various groups questioned can be constructed.

As a total group the students were drawn from predominantly manual backgrounds and as "early leavers" had few SCE passes. That 11% of craft students had 3 or more "O" passes is however worth emphasising, in view of Technician and ONC entry qualifications and in view of the Part 2 successes of students with "O" grades (4.47).

The comparisons made within the sub-groups showed year of leaving school and number of "O"'s held to be variables where statistically significant differences were found although insufficient information was available on what differences, if any, might exist between 3rd year and 4th year school leavers if one could take into account whether numbers of 3rd year leavers attended pre-apprenticeship courses.

The "between colleges" comparison suggested that the city colleges were more likely to draw their craft students from those who had left school at the first opportunity (4.21) while this same intake were most likely to attend social clubs (4.22). The craft students in the country colleges had more schooling and more SCE passes, while their main club activities were in youth organisations.

The comparisons between courses (4.31 - 4.36) showed that Caterers and Fabricators were the most likely to differ from the other courses. The Caterers were more likely to have fathers in professional occupations, were most satisfied in their job choice and were least able to join clubs. The Fabricators were the most likely to have fathers in manual occupations and were least likely to have desired this particular job on leaving school. The question of year of leaving school showed that Fabricators and Joiners were least likely to have attended a fourth year or to hold SCE passes, while Caterers also were mainly third year leavers. In the case of the Caterers this is partly due to many of them making the first year of their further education a pre-vocational year. The Electricals and Mechanicals had more

"O" grades to show for their schooling while the Mechanicals were also the least likely to have changed firms during their apprenticeship.

A very clear cut picture emerged of the differences between those successful in City and Guilds examinations and those not successful. At the Part 1 stage, (4.41 - 4.45) those failing were more likely to have fathers in manual occupations, more likely to have attended a Junior Secondary School, leaving it at the end of their third year, and more likely to be already a year behind their contemporaries either because they had already experienced failure in their course or because they had changed job and firm. At the Part 2 stage (4.46 - 4.48) those failing tended to be early leavers with few "O" grades whose year of apprenticeship was already out of step with the year of the college course they were attempting. When comparing all those from the original group who had left college against those who stayed, (4.49) one again notices that arly leavers from FE were also more likely to have shown the same tendency at Secondary education, while the increased tendency to leave FE at the third or fourth year stage could be attributed to age or possession of at least a Part 1 Certificate.

There was a lack of significant differences between the various year groups, (4.51, 4.52) since although new entrants to further education might have more "O" grade passes and have changed firm less often than previous new entrants, those who stayed in further education from previous intakes were also those with more "O" grade passes and fewer changes of employment.

The final comparison which was possible between first year day release students and their full-time and block release counterparts once more showed (4.61, 4.62) that year of leaving school and "O" grades held indicated significant differences between the groups, with the day release students being less likely to have attended a fourth year or taken SCE examinations.

Comments

Although the City and Guilds Craft courses do not specify SCE passes as a requirement from applicants, with each intake the percentage holding such passes increases so that of all the first year students questioned in 1968/9, nearly 19% had 3 or more "O" grade passes. On the evidence available from these first year students whose progress in the second year was known, it was found that half of those with 3 or more "O" grades could expect to progress to Technician courses. Only time will tell if the other 10% of a first year intake who remained in Craft courses have more chance of being promoted to more advanced courses under the new City and Guilds Course 500. There are signs from some Scottish Colleges to indicate that a number of firms are seeking to use Course 500 as a diagnostic year to enable them to decide which apprentices might benefit from more testing courses. Another future development which might make for a more even craft intake is the raising of the school leaving age. If advantage can be taken of the extra year of schooling, then some of the differences which at present exist between the two types of entrant to further education may disappear.

References

Classification of Occupations 1966	(HMSO)
15 to 18 (The Crowther Report)	(HMSO-1960)
Schools Council - Enquiry 1 - Young School Leavers	(HMSO-1968)
A Study of Fifteen-Year-Olds	(SCRE publication 62 - ULP-1971)

CHAPTER 5

THE MULTIPLE CHOICE QUESTIONNAIRE

In the Multiple Choice Questionnaire a number of questions were included which were similar to questions in the interviews. Where appropriate, similarities and dissimilarities between questionnaire and interview responses have been commented on. The form of the chapter is similar to Chapter 4 with sections devoted to each of the possible comparisons, and significant differences measured by means of χ^2 analysis. Where necessary, the responses to certain questions have been combined under a suitable heading. In common with previous chapters, the number of observations is quoted, and in this case the maximum number is 1647, that being the number of students who filled in questionnaires. The variables included in this chapter are 34 to 66, 76, 77, 80, 81, that is Sections A and B of the questionnaire (Appendix E) and Section C excluding the questions on students' spare time interests. In a number of questions, some of the replies made by students interviewed are also quoted to save the reader constantly referring to previous chapters.

1 A background picture of "all students"

The questions on the various aspects of college facilities are not directly comparable with the interview questions, and the answers are therefore merely listed.

5.101 Student Facilities

V34 The student facilities generally are ...

(Percentages)

	Good	Reasonable	Bad	n
All students	20	60	20	1615

5.102 College Lunches

V35 The lunches are ...

(Percentages)

	Good	Reasonable	Bad	I lunch out	n
All students	8	34	18	40	1627

5.103 Common Rooms

V36 The common rooms are ...

(Percentages)

	Good	Reasonable	Bad	n
All students	16	47	37	1572

5.104 Mixed Common Rooms

V37 Should the common rooms be mixed?

(Percentages)

	Yes	No	n
Male students	92	8	1439
Female students	65	35	111

5.105 Library Usage

V38 I use the library ...

(Percentages)

	Regularly	Occasionally	Never	n
All students	9	67	24	1641

5.106 Car Parks

V39 The car parking facilities are ...

(Percentages)

	Good	Reasonable	Bad	n
All students	24	39	37	1382

5.107 Control of Student Facilities

V40 All the student facilities should be run ...

(Percentages)

	By students	By staff	By both	n
All students	73	15	12	1640

Few students were willing to commend wholeheartedly the various aspects of college facilities but the percentage disapproving was often only marginally larger than the percentage approving.

5.108 Day Release

V41 My opinion of Day Release is ...

(Percentages)

	A day off	Good	OK	I forget between weeks	Rather be at work	n
All students	9	12	48	8	23	1560
Interviews	5	43	18	*	12	440

5.109 Block Release

V42 My opinion of Block Release is ...

(Percentages)

	Preferable	I would forget more	I would get fed up	Costs too much	n
All students	49	7	31	13	1336

5.110 Full Time attendance

V43 My opinion of Full Time is ...

(Percentages)

	It is best	Too similar to school	A waste of time	n
All students	47	38	15	1360
Interviews	59	41		430

The answers given to the questions on the various forms of attendance differ significantly from the answers in the interviews. There is less support for day release and full time courses than among those interviewed.

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* This symbol will be used throughout the chapter where the wording of interview responses does not coincide exactly with questionnaire responses.

5.111 Practical

V44 I think the practical is ...

	(Percentages)			
	Good	OK	Bad	n
All students	59	17	24	1576

5.112 Theory

V45 I think the theory is ...

	(Percentages)			
	Good	OK	Bad	n
All students	67	16	17	1622

5.113 Calculations

V46 I think calculations are ...

	(Percentages)			
	Good	OK	Irrelevant	n
All students	48	32	20	1603

5.114 Science

V47 I think science is ...

	(Percentages)			
	Good	OK	Irrelevant	n
All students	36	27	37	1230

5.115 Technical Drawing

V48 I think drawing is ...

	(Percentages)			
	Good	OK	Irrelevant	n
All students	63	23	14	1376

5.116 Liberal Studies

V49 I think Liberal Studies are ...

	(Percentages)				
	Good	Pass the time	Bad	Rotten	n
All students	30	37	21	12	1491

5.117 Choice in Liberal Studies

V58 I would prefer Liberal Studies if we had a choice of subjects.

	(Percentages)		
	Yes	No	n
All students	75	25	1491

When giving their opinions on the various subjects of their courses, the students were more complimentary than those interviewed. A direct comparison has been made between interview and questionnaire answers on this topic in Section 7 of this chapter in an attempt to explain the differences.

5.118 Changes in Craft Courses

V59,60 What changes would you suggest in your course?

	(Percentages)				
	More practical	More theory	More related studies	More liberal studies	n
All students	51	20	22	7	1242

	More PT	More free time	More choice of subjects	n
All students	25	28	47	1095

When asked what changes were needed in their courses, approximately half of those answering wanted more practical and a choice of subjects.

5.119 College Attendance

V61 Reasons for attending college ...

	(Percentages)			
	Certificates and experience	Social	Promotion and money	n
All students	57	11	32	1581

5.120 Motivation of students

V62 Why do you work hard at college?

	(Percentages)				
	To pass exams	Extrinsic reasons	Intrinsic reasons	Never do	n
All students	46	38	15	1	1574

The main reasons given for attending college and working while there were similar to the interview reasons that colleges existed to provide opportunities for passing examinations and gaining certificates.

5.121 Job Placement

V63 I got my present job ...

	(Percentages)						
	Through the YEO	Through a relative	Through a friend	Through an advert	By going to the firm	Through school	n
All students	21	17	9	10	35	8	1519
Interviews	7	15	17	4	48	9	415

5.122 Job Choice

V64 I wanted this job because ...

	(Percentages)						
	I liked similar work	It has a future	My parents advised it	It pays well	Any trade would do	Others	n
All students	50	41	5	4	*	*	1501
Interviews	47	21	4	6	19	10	415

5.123 Choice of Employer

V65 I chose this firm because ...

	(Percentages)						
	Parents advised it	It was near home	Friends advised it	I was sent	Good reputation	Good wages	n
All students	12	21	8	15	33	11	1432

5.124 Student ambitions

V66 My ambitions are ...

	(Percentages)						
	None	Be good at job	Do well	Emigrate travel	Change jobs	Settle down	n
All students	6	19	36	25	13	1	1597
Interviews	11	24	40	16	17	3	440

In the questions relating to present job and future plans one or two changes of emphasis from the interview answers are worthy of note. A

greater percentage remembered the assistance of the Youth Employment Service when given this alternative answer in a questionnaire; more emphasis was placed on the future of the job in the questionnaire replies; more desire to emigrate was shown when given this alternative in the questionnaire.

In the final section of the questionnaire, a number of questions were asked about leisure time, and the students' opinions of the college's place in their leisure time.

5.125 Desired spare time activities

V76 What other activities would you like to take part in?

	(Percentages)				
	Sport	Beat clubs	Social clubs	Youth clubs	n
All students	78	1	17	4	476

(The small number of replies to this question suggest that, as was found in interview, many students were satisfied with their existing interests.)

5.126 Faults of college clubs

V77 The trouble with college clubs is ...

	(Percentages)					
	Too far to travel	Bad atmosphere	Too many are sports	Too many in evening	Badly advertised	n
All students	29	44	5	11	11	1270

5.127 Reasons for under-utilisation of college clubs

V80 I have never attended a college activity because ...

	(Percentages)				
	Too many other interests	Outside facilities are better	Glad to get out of college	No guests allowed	n
All students	45	23	20	12	1215

In common with the interview replies, many students desired more sports opportunities in their district and did not participate in the college's leisure activities either because of the distance from their home

or because of its alleged bad atmosphere or because of their other interests. (The use of the term "bad atmosphere" indicated one of two main objections. The students either disliked some other students who ran these activities or they disliked members of staff responsible for these activities.)

In the question on desired changes in further education, multiple responses were common, and the results are therefore quoted as percentages of all respondents.

5.128 Changes in FE colleges

V81 What changes would you make in your college?

(Percentages)

	Better common rooms	Change the hours	Make courses more relevant	Give students more say	n (Students)	n (Responses)
All students	28	50	38	54	1464	2410
Interviews	41	34	28	30	440	586

The students' answers differed from the interview answers in that "better facilities" was now seen as the least important change instead of the most important.

In the questionnaire half of all students wished to see the hours of attendance at college rationalised and wished for more opportunities to voice their opinions about college.

2 Differences between colleges

The students in the various colleges only differed in their attitudes to three of the variables concerning facilities.

5.21 Student Facilities

V34 The student facilities generally are ...

	(Percentages) Good	Reasonable	Bad	n	Significance level
College A	30	59	11	379	
College B	12	64	24	812	0.1
College C	31	54	15	340	
College D	12	48	40	84	

5.22 Common Rooms

V36 The common rooms are ...

	(Percentages) Good	Reasonable	Bad	n	Significance level
College A	14	51	35	368	
College B	9	46	45	800	0.1
College C	37	49	14	336	
College D	8	24	68	68	

5.23 Control of Student Facilities

V40 The student facilities should be run ...

	(Percentages) By students	By staff	By both	n	Significance level
College A	73	14	13	382	
College B	76	14	10	828	0.1
College C	62	17	21	345	
College D	82	10	8	85	

It is noteworthy that the level of disapproval of college facilities is directly related to the age of the college buildings, Colleges C and A being the newest and the students finding them generally satisfactory. With regard to student participation, College D students are the least anxious to have staff involvement in student facilities.

3 Differences between courses

Students on the various courses had significantly different opinions on two aspects of the college facilities.

5.301 Common Rooms

V36 The common rooms are ...

	(Percentages)				
	Good	Reasonable	Bad	n	Significance level
EI	9	47	44	183	
JR	7	51	42	316	
MEC	14	45	41	695	0.1
CC	34	49	17	265	
FEC	31	40	29	113	

5.302 Library

V38 I use the library ...

	(Percentages)				
	Regularly	Occasionally	Never	n	Significance level
EI	13	69	18	194	
JR	11	74	15	324	
MEC	6	63	31	732	0.1
CC	13	75	12	274	
FEC	3	56	41	117	

These differences are due, in the first case, to the support of Caterers for existing common rooms and in the second case, to the under-use by Mechanicals and Fabricators of library facilities.

In addition, the Caterers alone differed significantly from the rest on the questions of lunches and the control of student facilities.

5.303 College Lunches

V35 The lunches are ...

	(Percentages)					
	Good	Reasonable	Bad	I lunch out	n	Significance level
CC	9	51	26	14	271	0.1
Others	9	30	16	45	1356	

5.304 Control of Student Facilities

V40 The students facilities should be run ...

	(Percentages) By students	By staff	By both	n	Significance level
CC Female	54	27	19	116	0.1
Others	75	10	15	1366	1.0
CC Male	66	18	16	158	

These tables would appear to show in the first case a sort of professional loyalty and in the second case the lesser militancy of female students. Another contributory factor to the differences between Caterers and others may be the physical separation which exists in many colleges between staff and students in Catering and in other subjects, due to the existence of separate restaurant and changing facilities in Catering departments.

5.305 Block Release

V42 My opinion of Block Release is ...

	(Percentages) Preferable	I would forget more	I would get fed up	Costs too much	n	Significance level
EI	52	9	33	6	159	
JR	38	5	32	25	271	
MEC	48	7	35	10	625	0.1
CC	68	8	17	7	186	
FEC	43	6	27	24	97	

5.306 Full Time Attendance

V43 My opinion of Full Time is ...

	(Percentages) It is best	Too similar to school	A waste of time	n	Significance level
EI	47	39	14	167	
JR	43	38	19	261	
MEC	47	40	13	621	0.1
CC	64	26	10	216	
FEC	31	44	25	95	

On the questions of form of attendance, the students on the various courses differed significantly in their opinions on Block Release, along the lines indicated by the interviews, while there was less support for Full Time courses than had been expressed by those interviewed.

Two subject areas caused significant differences of opinion between courses.

5.307 Practical

V44 I think the practical is ...

	(Percentages) Good	OK	Bad	n	Significance level
EI	52	12	36	187	
JR	63	17	20	320	
MEC	52	20	28	686	0.1
CC	83	10	7	268	
FEC	52	27	21	115	

On practical, Caterers' opinions were again considerably different from those of other students.

5.3081 Technical Drawing

V48 I think drawing is ...

	(Percentages) Good	OK	Irrelevant	n	Significance level
JR	73	22	5	314	
MEC	66	23	11	623	1.0
FEC	82	15	3	113	

Opinions on Technical Drawing had shown significant differences in the interviews, and on this occasion the Joiners seemed more in favour than those Joiners who had been interviewed. That filling in a questionnaire caused a less critical attitude towards individual subjects is noted elsewhere.

5.3082 Technical Drawing

V48 I think drawing is ...

	(Percentages) Good	OK	Irrelevant	n
JR	72	23	5	277
Interview	36	12	52	82

Even if those answering the questionnaire are made directly comparable to those interviewed, that is excluding first year answers, the Joiners answering questionnaires were still significantly more favourable than those interviewed.

5.309 Changes in Craft Courses

V59 What changes would you suggest in your course?

(Percentages)

	More Practical	More Theory	More Related Studies	More Liberal Studies	n	Significance level
EI	73	12	10	5	166	
JR	49	22	23	6	251	
MEC	41	20	30	9	523	0.1
CC	62	24	8	6	211	
FEC	42	14	37	7	91	

As might be expected, different groups showed different preferences for the parts of their course.

These results differed from the interview results mainly because the question offered only some of the responses made by those interviewed. On all occasions when this question was put, in various forms, the most common response was nearly always a request for more practical.

5.310 Motivation of students

V62 Why do you work hard at college?

(Percentages)

	To pass exams	Extrinsic[1] reasons	Intrinsic reasons	Never do	n	Significance level
EI	57	32	11	0	190	
(Interviews	64	32	13	6	72)	
JR	38	44	16	2	313	
(Interviews	50	18	31	10	168)	
MEC	47	39	13	1	701	
(Interviews	43	25	39	5	152)	
CC	47	27	26	0	259	
(Interviews	53	11	42	3	38)	
FEC	40	47	12	1	111	

[1] The answers which were interpreted as "extrinsic reasons" and "intrinsic reasons" are explained in 2.312.

In the interviews, different groups gave different reasons for working hard at college. In the questionnaire, the course groups again differed, with the Joiners and Fabricators placing more stress on extrinsic reasons and less on passing examinations. The questionnaire answers, however, indicated much less support for extrinsic factors leading to effort at college.

5.311 Job Choice

V64 I wanted this job because ...

(Percentages)

	I liked similar job	It has a future	My parents advised it	It pays well	n	Significance level
EI	23	65	7	5	184	
JR	70	22	3	5	303	
MEC	51	41	5	3	679	0.1
CC	41	53	2	4	240	
FEC	49	27	12	12	95	

5.312 Choice of Employer

V65 I chose this firm because ...

(Percentages)

	Parents advised it	It was near home	Friends advised it	I was sent	Good reputation	Good wages	n	Significance level
EI	9	22	10	13	33	13	174	
JR	12	24	15	18	22	9	298	
MEC	13	18	5	14	41	9	677	0.1
CC	8	19	7	14	31	21	180	
FEC	13	25	11	16	22	13	103	

5.313 Student Ambitions

V66 My ambitions are ...

(Percentages)

	None	Be good at job	Do well	Emigrate travel	Change jobs	Settle down	n	Significance level
EI	8	24	34	24	9	1	193	
JR	8	17	43	18	12	2	320	
MEC	6	17	34	26	16	1	707	0.1
CC	4	25	38	25	5	3	264	
FEC	5	16	27	31	20	1	113	

On the questions of present and future work there was considerable agreement between the opinions expressed in interview and questionnaire.

One final significant difference between the courses is with regard to the changes necessary on their courses.

5.314 Changes in FE colleges

V81 What changes would you make in your college?

(Percentages)

	Better common rooms	Change the hours	Make courses more relevant	Give students more say	n (Students)	n (Responses)	Significance level
EI	40	49	39	49	172	301	
(Interviews	37	33	29	35	72	96)	
JR	20	70	27	43	296	471	
(Interviews	26	43	29	22	169	220)	
MEC	29	49	40	58	669	1171	0.1
(Interviews	28	30	26	28	152	170)	
CC	30	32	38	59	232	371	
(Interviews	56	3	15	33	39	42)	
FEC	25	44	36	60	95	157	

All students placed less emphasis on better facilities than those interviewed, perhaps because in interview an "easy" response was to criticise common rooms, whereas the questionnaire offered alternatives which could be seen to be more important. The Joiners were, however, consistently outstanding in their demands for changes in the form of attendance, maintaining that the hours were too long.

4 Differences between success and failure

It was found to be impossible to draw comparisons between the success and failure groups because, in most cases, failing the course meant leaving the college and therefore not being present in the second year of the project to fill in the questionnaire.

5 Differences between year groups

The year groups questioned differed in their opinions on a number of topics.

5.51 College Lunches

V35 The lunches are ...

	(Percentages) Good	Reasonable	Bad	I lunch out	n	Significance level
1st Year	13	38	21	28	286	
2nd Year	7	30	22	41	312	
3rd Year	9	34	12	45	438	0.1
4th Year	7	29	18	46	260	
5th Year	4	23	15	56	47	

5.52 Car Parks

V39 The car parking facilities are ...

	(Percentages) Good	Reasonable	Bad	n	Significance level
1st Year	34	41	25	231	
2nd Year	29	33	38	241	
3rd Year	16	43	41	358	0.1
4th Year	16	36	48	220	
5th Year	7	27	66	44	

When questioned about lunches and car parks, 4th and 5th year students tended to be more critical.

5.53 Full Time Attendance

V43 My opinion of Full Time is ...

	(Percentages) It is best	Too similar to school	A waste of time	n	Significance level
1st Year	43	41	16	237	
2nd Year	37	43	20	256	
3rd Year	42	39	19	362	1.0
4th Year	55	36	9	211	
5th Year	66	34	0	35	

On the matter of modes of attendance there was a distinct tendency for more senior students to desire full time courses, perhaps due to a case of "distance lends enchantment ..", especially when it is noted that 4th and 5th year students were more favourable towards full time courses than those actually attending such courses (5.62).

There are no significant differences in the attitudes of the year groups to the various subjects of their courses which suggests that the prevailing attitudes are formed early in a student's career.

5.54 Motivation of students

V62 Why do you work hard at college?

	(Percentages)					
	To pass exams	Extrinsic reasons	Intrinsic reasons	Never do	n	Significance level
1st Year	42	37	19	2	281	
2nd Year	45	40	14	1	302	
3rd Year	45	38	17	0	415	1.0
4th Year	57	32	11	0	252	
5th Year	56	35	9	0	46	

On the question of incentives to hard work, 4th and 5th year students indicated a greater belief in the importance of certificates.

Significant differences are also found in the reasons for not attending college activities.

5.55 Reasons for under-utilisation of college clubs

V80 I have never attended a college activity because ...

	(Percentages)					
	Too many other interests	Outside facilities are better	Glad to get out of college	No guests allowed	n	Significance level
1st Year	42	22	19	17	213	
2nd Year	41	20	24	15	232	
3rd Year	44	26	21	9	333	1.0
4th Year	50	26	18	6	208	
5th Year	42	35	14	9	37	

Perhaps 1st and 2nd year students have as yet made fewer friends in college and feel that they would be more willing to attend college clubs if they could bring along their friends who do not attend college, while the students of 3rd and later years feel that opportunities outside the college are of more interest to them.

6 Differences between modes of attendance

On the questions relating to facilities, the groups differed in their opinions on Common Rooms.

5.61 Common Rooms

V36 The common rooms are ...

	(Percentages)				
	Good	Reasonable	Bad	n	Significance level
DR	23	53	24	279	0.1
FT & BR	18	36	46	170	

FT and BR students make more use of common rooms, and are therefore more likely to have definite opinions.

5.62 Full Time Attendance

V43 My opinion of Full Time is ...

	(Percentages)				
	It is best	Too similar to school	A waste of time	n	Significance level
DR	43	41	16	237	1.0
FT & BR	61	28	11	165	

When giving opinions on modes of attendance, it is not altogether surprising to find FT and BR students more favourable towards Full Time courses.

Significant differences are found on the questions relating to job choice.

5.63 Job Placement

V63 I got my present job ...

	(Percentages)					
	Through the YEO or school	Through a parent or friend	Through an advert	By going to the firm	n	Significance level
DR	27	29	12	32	266	0.1
FT & BR	54	14	8	24	119	

5.64 Job Choice

V64 I wanted this job because ...

	(Percentages)					
	I liked similar work	It has a future	My parents advised it	It pays well	n	Significance level
DR	50	40	4	6	264	1.0
FT & BR	34	57	3	6	156	

FT and BR students tend to work for larger firms and were more likely to have been told about job opportunities in these firms by their school or Youth Employment Officer. Those employed by larger firms can also see more clearly the opportunities for security and promotion.

7 The questionnaire answers of those interviewed

It has been observed in previous sections of this chapter that there are differences between interview and questionnaire answers. A direct comparison has therefore been made between answers given in questionnaire and interview by the same students. Since the second interview took place no more than a fortnight after the questionnaire was completed, these two sets of answers have been directly compared to see what differences occur to a student's response in these different situations. The variables which could be directly compared in this way were 44 to 49, 66 and 81. There are differences in the number of responses from question to question because some questions did not seem relevant to some students.

In no case is there a significant difference between the questionnaire answers of those interviewed and the questionnaire answers of all students, leading one to conclude that those interviewed were a representative sample of all who completed the questionnaire. There are, however, differences between the interview answers and the questionnaire answers of the students who were exposed to both instruments.

5.71 Practical

V44 What do you think of Practical?

(Percentages)

	Good	OK	Bad	n	Significance level
Questionnaire	54	18	28	172	
Interview	23	9	68	172	0.1

5.72 Theory

V45 What do you think of Theory?

(Percentages)

	Good	OK	Bad	n	Significance level
Questionnaire	68	16	16	223	
Interview	60	20	20	223	NS

5.73 Calculations

V46 What do you think of Calculations?

	(Percentages)				
	Good	OK	Bad	n	Significance level
Questionnaire	42	30	28	130	0.1
Interview	21	32	47	130	

5.74 Science

V47 What do you think of Science?

	(Percentages)				
	Good	OK	Bad	n	Significance level
Questionnaire	45	28	27	111	0.1
Interview	27	22	51	111	

5.75 Technical Drawing

V48 What do you think of Drawing?

	(Percentages)				
	Good	OK	Bad	n	Significance level
Questionnaire	74	19	7	114	0.1
Interview	44	11	45	114	

5.76 Liberal Studies

V49 What do you think of Liberal Studies?

	(Percentages)					
	Good	OK	Bad	Rotten	n	Significance level
Questionnaire	29	36	20	15	161	1.0
Interview	32	20	8	40	161	

This comparison of interview and questionnaire indicates that the interview has provoked more critical responses about the subjects students take.

The questions on ambitions and changes in college did not follow the same clear-cut pattern.

5.77 Student Ambitions

V66 What are your ambitions?

	(Percentages)							
	None	To get promotion/ make money	To be good at the job	To leave the trade	Emigrate/ travel	n	Significance level
Quest-ionnaire	5	43	16	12	24	232	0.1
Interview	16	46	32	6	*	232	

The fact that the desire to emigrate was probed in another interview question explains part of the difference between the two sets of answers. In addition, many of the 16% of those interviewed who could think of no ambitions were able to respond to one when a list was presented in the questionnaire.

5.78 Changes in FE colleges

V81 What changes would you make in your college?

	(Percentages)						
	Better common rooms	Change the hours	Make courses more relevant	Give students more say	n Students	n Responses	Significance level
Question-naire	29	60	47	50	192	356	0.1
Interview	49	26	16	26	192	223	

The most important single change in the answer pattern of this question is that many fewer students criticised common rooms in the questionnaire. One interpretation has been offered previously in connection with answers to Table 5.314.

Questionnaire and Interview

While both interview and questionnaire might well be equally reliable instruments, the one if the interviewer is skilled and the other if the compiler had done careful preparatory work, the tables in this section, particularly 5.77 and 5.78 and others in the rest of the chapter (5.122, 5.310) indicate one of the main differences between the two types of research tool. Interviews, by allowing a free response cannot be said to suggest an

answer unless by some inflexion or gesture by the interviewer, but they also cannot assist the respondent whose memory cannot call up the best response at the moment of questioning. The questionnaire allows only a limited choice of responses, thus occasionally forcing the respondent to make a reply which is not exactly what he intended, but the bias of the questioner is felt less. On the other hand, the questionnaire might not simply supply exactly the answer the respondent was searching for in the parallel interview situation, but might in fact prompt an answer which seemed a convenient let out for the respondent (5.124).

The two types of instrument also differ when it comes to scoring. The questionnaire responses are generally clear and can be objectively assessed, but interview answers are sometimes complex and wide-ranging. The interviewer then has to decide subjectively what the respondent really meant, and having done so, must fit the answer into one of a limited number of categories, limited by the need to present answers in such a way that his audience may have some understanding of them.

The differences between questionnaire and interview answers noted in this and preceding sections points to the conclusion that the interview situation encouraged students to be more critical. It is difficult to say which set of answers is of most value in understanding craft apprentices. Perhaps in interview we see a reflection of the comments students might make to fellow students, while filling in a questionnaire causes them to answer as they wish to be seen by those in authority.

Summary

Where the questions asked depended more on the students' opinions, considerable differences appeared between groups of students. Taken together, the opinions of "all students" give a reference point for the comparisons of other groups.

The students as a whole (5.101 - 5.107) thought that college facilities were less than good in every amenity.

Block Release and Full Time forms of attendance were seen by many to be preferable to Day Release (5.108 - 5.110).

Their opinions on the various subjects of the course showed that Theory, Drawing and Practical were the best liked subjects, while if they could change the form of their courses they would wish more Practical and a choice of subjects (5.111 - 5.118).

The technical college was seen very much in vocational terms and the main reasons given for not attending non-course activities were the alleged bad atmosphere of the college's non-course activities (5.126), by which the students generally implied a clash of personalities between themselves and fellow students or members of staff, and the pressure of outside interests (5.127).

Many of the reasons given for taking up their present occupation depended on a "grapevine" effect, the students being influenced by the opinions of others, the reputation a certain trade or firm had in their district, and their previous experience (5.121 - 5.123).

When giving opinions on what they would like to do with themselves and with the college, the students showed a strong wish to do well at work (5.124), although a third of them were anxious to change their job or their residence, while the college was seen to need shorter courses and a better machinery for involving the students (5.128).

The differences which appeared between colleges (5.21 - 5.23) confirmed the previous suggestions that the course was a greater influence on a day release student than the college. The only questions showing differences between colleges were those on facilities where the newer colleges were seen as better provided and where the students in the county colleges were less anxious to see the staff involved in running student facilities than their city counterparts.

The greatest number of significant differences was seen in the differences between the various courses. The opinions of the Caterers on students' facilities (5.303, 5.304) differed significantly from the rest due to their professional experience, their separate existence in some colleges, and the presence of female students. Opinions on Block Release and Full Time attendance (5.305, 5.306) showed the Caterers to be most in favour and the Joiners and Fabricators to be most opposed to these. The Caterers also differed from the rest due to their greater liking for Practical (5.307) while the Fabricators showed most support for Drawing (5.308). Caterers and Electricals were the most anxious for more Practical, the one because they liked the present content and the other because they had hardly any at present and the Mechanicals and Fabricators were the most anxious for more Related Studies (Drawing and Calculations) (5.309).

The Electrical students saw the certificates they would get as the greatest incentive, while the Joiners and Fabricators were the students most governed by extrinsic pressures, without which many of them would not attend college (5.310).

In terms of job and firm, Joiners were influenced by their previous experience of woodwork at school in choosing a trade and by the advice of others in choosing a firm, while Caterers and Electricals chose their job for its prospects and Mechanicals chose their firm for its reputation (5.312).

In improving themselves (5.313), Caterers desired to do well in their chosen trade and Fabricators were anxious to move, opinions which reflected the degree to which the respective groups felt themselves to be in their desired occupation (5.35).

Various groups had different ideas on improving their situation in the college, with the Joiners wishing changes in the attendance and the Caterers, Mechanicals and Fabricators wanting more say in running their affairs (5.314).

The different year groups had different opinions on two aspects of college facilities (5.51, 5.52), with the more senior students being less anxious to take college lunches and more anxious to have better car parking facilities. Being more predominantly car owners, senior students were also better able to leave their colleges at lunch times.

The senior students also felt that full time attendance would suit them better (5.53, 5.54), possibly because it would help them to gain the

certificates which they saw as the major reason for attending college.

A final difference among the year groups was in their reasons for not attending college activities (5.55), where the senior students were more anxious to use outside facilities which they considered better and the junior students were more anxious to bring their friends along than were their senior counterparts. It might well be that the senior students' opinions indicate a college's success in introducing them to leisure time interests.

Because they made more use of common rooms (5.61), the Full Time and Block Release students were more critical of them and, having had no direct experience of Full Time courses (5.62), the Day Release students were less able to give clear cut opinions on them. The students on different forms of attendance also showed differences in the ways of finding a job (5.63). Full Time and Block Release students were better qualified and were therefore better able to gain the positions recommended by the Youth Employment Service, while the Day Release students were more likely to have used personal contacts or to have made a direct approach to the firm. In choosing their job (5.64), Day Release students had leaned more heavily on their previous experience while Full Time and Block Release students had paid more attention to future prospects.

The differences between questionnaire and interview answers (5.71 - 5.76), indicated that the interview situation generally caused students to be more critical. Some questions (5.77 - 5.78), did not provide this clear-cut distinction and reasons for this have been suggested in Section 7. Any attempt to find the reasons for the differences which occurred in these two questions would have to use different methods of posing the questions and analysing the results than were used in this study.

Comments

Even if we accept the argument that college facilities such as common rooms and refectories could never improve as quickly as students' expectations, the present standards in facilities do seem to act as a disincentive to students, particularly to Full Time and Block Release students. This is important when the percentage of the student body on such courses seems likely to continue to rise.

Student desires for more Practical and wider choice within their courses are less easy to satisfy because recent developments within further education leave practical training to industry while courses themselves are becoming narrower. The fact, however, that there is now a wider variety of courses may act to reduce the desire for more choice by fitting in more closely with the student's occupation.

The answers to the questions on job choice show that there is a need for further research into the guidance given to prospective school leavers, while the answers to the questions on college activities suggest that there is perhaps an under-utilisation of college facilities in restricting them solely to college students. Some commentators on the further education scene have expressed their view that it would be desirable to open up colleges to outside bodies, particularly in the evenings.

The evidence from the various courses suggest that in some occupations, further education is held in low regard, and that industry and education together will have to examine the causes, deciding either that many entrants need less education and training than is presently offered or else that there is a lack of opportunity for some entrants both in industry and in education.

The various responses of the students pose the question of whether the students see the technical college as really offering them "further" education or whether they see it as offering them merely the "associated" education which their employer requires them to attend in order to fulfil certain obligations to such bodies as training boards and trades unions.

The general conclusion from this chapter is that there is a need for providing young people with more information on jobs, firms and further education.

CHAPTER 6

THE ATTITUDE SCALE

1 Construction of the scale

The attitude scale (Appendix B2) on which this chapter is based was compiled from a number of questions previously used by R Ann Abel and G J Pollock, with an additional list of questions devised by the Research Officer. This gave an original draft of 25 questions (Appendix B) which was administered to large numbers of students. At the same time computer analyses were made of the answers given by sample groups of students. The form of analysis was to invite members of college staffs to rate groups of students on their attitude to further education, and then to correlate these results against the students' total scores and the scores on individual questions. From the resulting correlation matrix, questions were sought which correlated highly against the teachers' ratings and the students' total scores. In this way, the fourteen questions forming the final scale were selected, and all reported scores are based on this version.

The scale has a number of negative and a number of positive items. Items 1, 4, 7, 9, 12 and 14 are positive and are scored from 1 (strongly agree) to 5 (strongly disagree), while items 2, 3, 5, 6, 8, 10, 11 and 13 are negative and are scored from 5 (strongly agree) to 1 (strongly disagree). The possible range of scores is thus from 14 (very favourable to further education) to 70 (very unfavourable to further education).

The reliability of the scale was gauged by a test/retest procedure, the retest being made after approximately ten days. Retests were performed on complete year groups of students, and the reliability coefficients for second and later years varied from .7 to .8. For first year groups the coefficients were low, indicating that at that stage the students had had insufficient experience of further education to have formed stable attitudes. This of course indicates that with first year groups, colleges have a chance to change attitudes.

One measurement of validity was made by comparing student scores with teacher estimates and while there were variations in the degree of correlation, the estimates of experienced teachers generally correlated between .6 and .7 with student scores.

In order to make more use of the attitude scale two Principal Components analyses were made and, from these, four main factors were extracted. Factor 1, accounting for 27.9% of the variance, had high loadings on all the questions, and was therefore named "General Attitude"; Factor 2, accounting for 13.1% of the variance, had high loadings on questions 1, 3, 11 and 12 and was named "Attitude to Work"; Factor 3, accounting for 8.6% of the variance, had high loadings on questions 2, 6 and 8, and was named "Attitude to Work/Education"; while Factor 4, accounting for 8.0% of the variance, had high loadings on questions 10 and 14, and was named "Attitude to Education".

The uses to which the factor scores were put will be discussed in Chapter 7.

On all occasions the scale was administered by the Research Officer, and the students seemed to accept his promises of confidentiality.

2 The test results

Mean scores were obtained for each year group in 1967/8 and again in 1968/9. Comparisons were made on each occasion between different colleges and different courses. Comparisons are also made between equivalent groups on the two test occasions, eg JR 1 (1967/8) and JR 1 (1968/9). In 1967/8 a comparison was made between those on Part 1 of their City and Guilds course and those on Part 2. This was found to be of interest, but of doubtful significance due to the membership of the Part 1 and Part 2 groups being different. However, in 1968/9 a more valid comparison could be made between those students who were in Part 1 in 1967/8 and Part 2 in 1968/9, or in Part 2 in 1967/8 and Part 3 in 1968/9, to see if there were any significant differences associated with passing an external examination.

6.21 Course and College Scores

Attitude Scores [1]

Course	College A		College B		College C	College D
	67/8	68/9	67/8	68/9	68/9	68/9
Joiners 1			40.87	44.28		
Joiners 2	41.29	42.28	41.78	42.54		
Joiners 3	39.85	37.80	42.97	43.51		
Joiners 4	39.04	32.22	36.59	36.06		
Joiners 5		37.72		39.33		
Mechanical 1			40.33	40.72	38.00	
Mechanical 2			43.16	40.52	40.91	
Mechanical 3	38.05	39.02	39.30	39.08		38.98
Mechanical 4		36.64	41.12	38.94		
Mechanical 5				37.73		
Basic Engineering			38.32	38.14	39.55	39.26
Electrical 1			40.36	41.98		
Electrical 2			37.37	38.98		
Electrical 3			36.52	36.42		
Electrical 4				34.30		
Catering FT	36.70	32.78	37.21	39.95	36.63	
Catering 1					38.95	
Catering 2			38.14	36.44	39.27	
Catering 3			35.33	37.06	36.60	
Catering 4			35.00	37.77	35.97	
Fabrication 2	36.68		42.33	42.84	40.33	
Fabrication 3				47.88	37.18	

There is no invariable trend in attitude scores, although the pattern which seems to emerge is for attitudes towards further education to improve as the apprentice progresses through his college course. Additional information on trends in Attitude scores appears in Tables 6.25 and 6.26.

[1] NB The higher the score, the more unfavourable the attitudes are.

6.22 Significant differences in attitudes between comparable groups

	Comparison of equivalent groups
College A	Joiners 4 1967/8 and 1968/9; 0.1% significance in favour of 1968/9 students
College B	Joiners 1 1967/8 and 1968/9; 5% significance in favour of 1968/9 students
	Mechanicals 4 1967/8 and 1968/9; 5% significance in favour of 1968/9 students

There are no other significant differences between students in a particular course-year in 1967/8 and their counterparts in 1968/9.

The three cases where significant differences occur means that in nineteen other comparisons, no differences have been observed. By chance alone, some significant differences would emerge, but the general conclusion from this and other tables is that there are a number of common factors from year to year such as the form of the course, the material presented by college staffs and the nature of students following each stage of each course. These common factors help to ensure that equivalent groups of students make similar attitude scores from year to year. It is of interest that the significant improvement in attitude scores noted for Joiners 4 coincided with drastic changes in the course, reducing it by one year and introducing options.

6.23 Comparisons between colleges and courses 1967/8

Tests of significance

Between Colleges	Within Colleges
No significant differences	College B - Joiners significantly less favourable than Electricals and Caterers at the 0.1% level.

6.24 Comparisons between colleges and courses 1968/9

Tests of significance

Between Colleges	Within Colleges
Joiners Colleges A and B - College A significantly more favourable at the 1% level.	College A - Mechanicals significantly more favourable than Joiners at the 1% level.
Fabricators Colleges B and C - College C significantly more favourable at the 1% level.	College B - Joiners significantly less favourable than Caterers. Electricals and Mechanicals at the 1% level.
	College B - Caterers significantly more favourable than Mechanicals at the 5% level.

Tables 6.23 and 6.24 show that differences are more often found between courses than between colleges. The differences between the Joiners of Colleges A and B could be explained by the teaching given, while the difference between the Fabricators of Colleges B and C is most probably due to the disciplined nature of the Foundry Department at College B, in which the Fabricators are placed.

6.25 Attitude scores and City & Guilds examinations

Tests of significance of differences in attitude scores between groups about to sit and having sat C & G Part 1 examinations, 1967/8.

Course	College A	College B
JR	NS*	Signif at 1%
MEC		Signif at 0.1%
CC		NS*

*NS = No significant differences

6.26 Attitude changes on passing City & Guilds examinations

Tests of significance of improvement in attitude scores associated with the passing of external examinations

Course	Exam	College A	College B	Colleges A/C	Colleges B/D
Joiners	C & G Pt 1	Signif at 1%	NS		
Joiners	C & G Pt 2	Signif at 0.1%			
Mechanical	C & G Pt 1		Signif at 0.1%		Signif at 2%
Mechanical	C & G Pt 2		Signif at 1%		
Basic Engineering	393		NS		
Electrical	C & G Pt 1		Signif at 5%		
Fabrication	C & G Pt 1			NS	
Catering	C & G Pt 1		NS		

From Tables 6.25 and 6.26 we observe that out of 14 possible comparisons between students before and after C & G examinations, 8 show significant changes in a more favourable direction, and from the 10 comparisons based only on the same students before and after such an examination, 6 show significant improvements.

It is also worth noting that there are no other significant differences between year groups who are separated by only one year of the course. This leads to the conclusion that passing a City and Guilds examination is often associated with a significant improvement in attitudes.

6.27 Fluctuations in attitude scores over 12 months

Correlations between attitudes in 1967/8 and 1968/9 by 1967/8 course of origin

Course of origin	College A	College B	Colleges A/C	Colleges B/D
Joiners 1		.489		
Joiners 2	.669	.362		
Joiners 3	.418	.750		
Joiners 4	.820	.745		
Mechanicals 1		.050		
Mechanicals 2		.677		.559
Mechanicals 3	.668	.626		
Mechanicals 4		.514		
Electricals 1		.559		
Electricals 2		.576		
Electricals 3		.726		
Basic Engineering		.528		
Catering FT		.460		
Catering 3		.431		
Fabrication 2		.578	.454	

If any trend is apparent from Table 6.27, it is the tendency for attitudes to become more stable in senior years of our courses. Certainly a correlation does not reveal if a whole year group has become more or less favourable in its attitudes, but only indicates if the members of the groups have remained in a similar order.

There are a number of indications from Table 6.27 that in certain year groups there have been considerable changes in the order of scores. There are a number of cases similar to MEC 1 in College B where the low correlation can be accounted for by one or two "rogue" scores, but a general cause of lower correlations is a "small group effect". It is very noticeable that, while the mean attitude scores of complete year groups show some pattern, the sections within each year group show very wide variations in mean attitude score. What seems to happen is that students may be in sections or classes with a favourable attitude and then in the next academic session find themselves in sections with unfavourable attitudes. This change generally causes such students to show a considerable change in their own attitude score, and also causes a considerable lowering in the correlation coefficient for the year group as a whole.

In order to investigate this "small group effect" more closely an arrangement was made with one college to set up a small experimental selection procedure. Under this arrangement, students of similar attitudes and abilities were grouped together in order to observe the effects of homogeneous as opposed to heterogeneous groupings. An examination of attitude scores over two years of homogeneous groupings showed that the test/retest coefficient was .77, while for sections of comparable students who were acting as controls, and were distributed in heterogeneous groups, the test/retest coefficient was .69. While the differences are small, these does seem to be some possibility of stabilising attitudes through homogeneous grouping. This must be qualified by noting that the homogeneous groups showed a slight deterioration in mean attitude. Over the two years of the experiment, the homogeneous groups showed a mean deterioration of 0.37 points in attitude scores, while the heterogeneous groups showed no change in attitude scores. Breaking these results down still further on the basis of those who were above average and

below average on the initial test of attitudes, we find that in the homogeneous groups the scores of above average students deteriorated by 0.69 points and the scores of below average students improved by 0.02 points, while in the heterogeneous groups the scores of above average students deteriorated by 0.24 points and the scores of below average students improved by 0.44 points.

This seems to suggest that, while homogeneous grouping can eliminate large fluctuations in individual scores, the group mean scores may drift adversely, when compared with equivalent heterogeneous groups. One might therefore conclude that students' attitudes are not particularly affected by the type of grouping, but that homogeneous groups' attitudes change more though not far enough to yield a statistically significant difference between the two types of grouping.

The "small group effect" is of great importance because where courses operate on a day release basis, and different sections of the same year group attend college on different days, then the student identifies much more closely with his section than he would in in a school situation or in a technical college full-time situation. A fuller description of this effect will be found in the author's MEd thesis[1].

Summary

The Attitude Scale gives an important indication of some factors associated with change in student attitudes. Two factors seem to emerge, (a) passing or failing an external examination, and (b) the nature of the prevailing attitudes in the section of which the student is a member.

There are also indications that scores on the Attitude Scale depend on the course a student attends and also on the year of the course he is presently attempting.

A factor analysis of the Attitude Scale yielded four main factors. The associations between these factors and other variables are discussed in Chapter 7.

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1 Attitudes and Ability in Craft Apprentices - A D Weir (unpublished MEd thesis, University of Edinburgh, 1971)

Comments

There are signs that the attitude scale is a reliable and valid instrument. It has, however, one considerable blind spot, and that is that it is less reliable with students who have only a short experience of further education, ie first year groups. Since it is important to pick out students of potentially poor attitudes at an early stage, some effort ought to be made in the future to devise a test of attitudes for new entrants. At the same time, the fact that attitudes fluctuate in a student's first year is of considerable value to the college staffs. It suggests that students are entering further education without preconceived prejudices, and therefore colleges can place a great deal of emphasis in the first year on improving student attitudes, with the prospect of success.

If the conclusions reached regarding the experimental selection procedure's effect on attitudes are correct, then more experimenting ought to be done in this area. If by simple tests we can direct students to the sections of a year group where their attitudes can be either improved or stabilised, surely we ought to do so. In addition, if the conclusions are correct, then it is obvious that colleges themselves are helping to produce bad attitudes in some of their students by not choosing their sections carefully enough.

If it can be agreed that one of the functions of education is to improve the consumer's attitudes to the product, then the suggestions of this chapter give a starting point for attempting to do so.

References

Attitudes and Ability in Craft Apprentices - A D Weir (unpublished MEd thesis University of Edinburgh 1971)

CHAPTER 7

THE INTERRELATIONSHIP OF ATTITUDE AND OTHER VARIABLES

1 Procedure

A considerable number of items of information available on each student were already organised so that the coded values could be considered as conforming to a continuous, fairly normal, distribution. A series of product moment and biserial[1] correlation coefficients were therefore computed to assess the strength of association between the various attitude scores and the other variables.

The variables included in these analyses were

V4	Year of course 1967/8
V5	" " 1968/9
Vs6-15	Attitude Factor Scores
V16	Age at 1/1/68
V17	" 1/1/69
V18	Size of students' home area 1967/8
V19	" " " " 1968/9
V20	Proximity of students' home area to college 1967/8
V21	" " " " " 1968/9
V22	Type of secondary school attended
V23	Year of secondary schooling completed
V24	Number of 'O' Grades held
V25	" 'H' " "
V26	Size of family
V27	Position in family
V28	Father's occupational level

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1 A biserial correlation coefficient is used to measure the degree of association between two variables when one of the variables, although continuous in nature, is measured on a two-point scale, eg Examination marks may be assessed simply as Pass/Fail. A point biserial correlation coefficient is more appropriate where the variable is truly dichotomous, eg Male/Female. The interested reader will find a fuller description of this topic in Quinn McNemar's "Psychological Statistics" (pages 189-192).

V29 Relationship of Father's occupation to student's
V30 Year of apprenticeship 1967/8
V31 " " 1968/9
V32 Number of firms worked in
V33 Number of trades worked at
V50 Sex of student
V51 Marital status 1967/8
V52 " " 1968/9
V53 School attended
V54 FE success
V56 Job choice
V58 Desire to have choice in Liberal Studies
V66 Number of club memberships
V82 Number of activities

A factor analysis of the attitude scale yielded a number of factors previously described in Chapter 4. The analysis of Factor 4 "Attitude to Education" indicated that Question 10 "Doing homework is of little value to apprentices" operated in a different direction in this factor. For Factor 4, Question 10 was accordingly scored in a positive direction, and the factor alternatively named 4b. In all other factors, the questions contributing to the factor were scored in the directions indicated in 6.1.

From the correlation matrices produced on the various sub-groups into which the sample could be divided, clusters of variables were extracted whose correlations with the attitude scores differed from zero at better than the 1% level of significance.

Two distinct sub-sets of variables were involved in the analyses, one relating to the students' attitude scores in 1967/8 and the other relating to the students' attitude scores in 1968/9. There were in addition, certain variables, eg V26 size of family, which related to the students' attitude scores on both occasions.

(a) The variables relevant only to the 1967/8 analysis were:

4, 16, 18, 20, 30, 51

(b) The variables relevant only to the 1968/9 analysis were:

5, 17, 19, 21, 31, 52

(c) The variables relevant to both analyses were:

22-29, 32, 33, 50, 54, 56, 58, 66, 82

The correlations are not necessarily based on the same number of students, even within the various groupings into which the information could be divided. This is due to students omitting to answer cetain questions on the various schedules. It was not considered appropriate to combine the individual correlations to give an indication of the multiple correlation of the various items with the attitude scores.

Correlation analyses were carried out on the students by college, course and year of course. The presentation of results indicates the items correlating significantly with the attitude scores. On most occasions, attitude Factor 1, (Vs6 and 11) total score, was the one where the highest values were observed. Correlations of items with the other attitude factors are however quoted where appropriate.

2 All students

The students represented in the investigation were drawn from many courses and colleges. Values in the range of $r^1 = .25$ to $r = .30$ were found between certain variables and the attitude scores in 1968/9. In particular, the total score (V11) correlated with sex and FE success (Vs50, 54) where female students were more favourable towards further education than male students and where students who had passed their external examination were more favourable than those who had failed.

3 The colleges

The students of each college produced a slightly different pattern, although again there were only a few significant correlations.

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1 r is the symbol normally used to indicate a product-moment correlation coefficient, but in this case it is used to indicated all types of coefficient.

7.31 COLLEGE A

In both years of the project there was a significant correlation between the total attitude score (Vs6, 11) and sex and FE success (Vs50, 54) where more favourable attitudes were associated with female students and those who had passed their examinations. The values of r were however higher, 0.45 and 0.35 respectively.

7.32 COLLEGE B

In the second year of the project, the students' answers again showed a significant correlation between Factor 3 "Attitude to Work/Education" (V13) and FE success (V54) with the students who had passed their external examination showing a more favourable attitude than those who had failed (r = 0.35).

7.33 COLLEGE C

Students from College C were only investigated in the second year of the project, and their attitude scores were associated with three other variables. Associations in the range r = .25 to r = .30 were found between total attitude score (V11) and year of course (V5), year of apprenticeship (V31), and sex (V50). Those who were more favourable to further education were female students and those students in later years of their courses and apprenticeships.

7.34 COLLEGE D

The students from College D numbered only 85. The correlation coefficient necessary to indicate a difference significant from zero at the 1% level for this size of sample is 0.28. The values of the association quoted between attitude scores and other variables while higher are not necessarily more significant than the values quoted in other, large groups.

The students in College D had been investigated previously while in attendance at College B. Their attitude score on that occasion on Factor 3, "Attitude to Work/Education" (V8) was associated (r = .50) with age, year of course, and year of apprenticeship (Vs16, 4, 30), all of which were highly intercorrelated (r = .80), and was also associated with type of school

(V53) attended. The pattern which emerged indicated that among College D students, those who were younger and in more junior years of their college and apprenticeship were more favourable in attitude Factor 3 score while those who had attended Roman Catholic schools were more favourable than those from non-denominational schools.

In the second year of the investigation the information on College D students showed an association (r = .28) between attitude score on Factor 3 "Attitude to Work/Education" (V13), and year of course, year of apprenticeship and type of school attended (Vs5, 31, 53), all in the directions observed in the previous year. In addition, there were significant correlations between the same factor and the student's position in his family (V27) and his father's occupational level (V28). The pattern here was that those who were among the eldest in their families scored more favourably as did those whose fathers were in higher level occupations.

It is worthy of note that for College D students, total attitude score did not show such high associations with other variables as did Factor 3, "Attitude to Work/Education".

4 The courses

7.41 Joiners

In the first year of the project an association of r = .25 was found between total attitude score (V6) and year of course (V4) and an association of r = .39 between total attitude score and the results of the external examination taken at the end of the year (V54). The students who showed more favourable attitudes were those in later years of the course, and those who would pass the external examination.

In the second year of the project, associations in the range r = .26 to r = .37 were found between total attitude score (V11) and the cluster of variables, age, year of course and year of apprenticeship (Vs17, 5, 31) indicating that older and more senior students had more favourable total scores. Associations in the range r = .25 to r = .31 were also found between total attitude score and the size of the student's home area (V19), and his marital status (V52). These indicated that the students with more favourable attitudes were those from larger towns and cities, and those who were married.

While those married students showed more favourable attitudes, it must be borne in mind that a considerable number of married students have to discontinue their further education for financial reasons. Married students who remain in further education are more likely to be the most enthusiastic.

7.42 Mechanicals

It has previously been mentioned (4.34) that Mechanical Engineering Craft was a course embracing many sub-specialisms and it is not surprising that there were few observed associations between attitude scores and other variables.

In the second year of the project a coefficient of r = .26 was observed between attitude Factor 3 (V13) and external examination success (V54) indicating that those who had passed their C and G examinations had more favourable attitudes than those who had failed.

7.43 Electrical

The responses of Electricians in the first year of the project showed a familiar cluster of associations of approximately r = .25 between total attitude score (V6) and age (V16) year of course (V4) and year of apprenticeship (V30) with again older and more senior students seeming to have more favourable attitudes.

In the second year of the project, larger coefficients (r = .32) were observed between total score and year of course (V5) and type of school attended (V53) indicating that favourable attitudes were more likely to be found in more senior students, and among those who had attended Roman Catholic schools.

Factor 4b also produced some significant coefficients. On both analyses, Factor 4b was associated (r = .30) with the relationship between father's job and student's job (V29).

7.44 Caterers

The Caterers were another group where total attitude score was not the factor which indicated the greatest number of associations. In their case, Factor 2 (Vs7, 12) produced most significant coefficients, while the other factors made additional contributions.

In the first year of the project, Factor 2 was associated (r = .283 to r = .356) with year of course (V4), year of training (V30), father's occupational level (V28), and sex (V50). More favourable attitude scores were associated with students in the later years of their course of training, with students whose fathers had higher level occupations and with female students.

In addition Factor 4b (V10) indicated an association (r = .27) between leaving secondary school in the fourth and later years (V23) and favourable attitudes.

In the second year of the project, Factor 2 was particularly associated (r = .427, .353) with marital status (V52) and job choice (V56) where more favourable attitudes were found among married students and those who had made a definite choice of Catering as a job. There was a lesser association (r = .25) with age, indicating some tendency for older Caterers to have more favourable attitudes.

In addition Factor 3 was associated (r = .28) with number of firms, (V32) where more favourable attitudes were associated with more changes of job.

7.45 Fabrication Engineers

In a similar manner to the Mechanicals, Fabrication students also represent a number of sub-specialist crafts. Similarly there is less of a general pattern emerging from the associated variables.

In the first year of the project, favourable attitude scores (V6) were associated (r = .39) with having attended a Roman Catholic school (V53) and with having made a definite choice of this trade (V56).

In the second year of the project, there was an indication that favourable total attitude scores were associated (r = .26) with age (V16) and with being active in a number of leisure activities (V82).

5 Year groups

Year groups, like colleges, contain students from many different courses. There were few observed associations, but most of the observed associations

occured in both years of the project.

7.51 First year students

In both years of the project, associations in the range r = .27 to r = .32 were observed between total attitude score (Vs6, 11) and sex (V50) and year of leaving school (V23). More favourable scores were made by female students, and by those students with four or more years of secondary education.

The analysis of those who were first year college students in 1968/9 also indicated an association between more favourable attitudes (V11) and more 'O' Grade passes (V24).

7.52 Second year students

On both occasions the only observed association (r = .31) was between attitude scores and external examination results (V54). The more successful a student in his external examinations, the more favourable his attitudes.

7.53 Third year students

The answers of both groups of third year students indicated an association (r = .26) between attitude Facotrs 1 and 4 (Vs6 and 10, 11 and 15) and sex (V50) and external examination results (V54). The more favourable attitude scores were linked with those students who were female, and those students who were successful in City and Guilds examinations.

There was a further association (r = .26) for 1968/9 students between scores on attitude Factor 3 (V13), "Attitude to Work/Education" and marital status (V52). The attitude scores of married students tended to be more favourable.

7.54 Fourth year students

An association (r = .60) was observed, among fourth year students indicating that students showing more favourable attitudes were those who were more successful in external examinations (V54). There was, for fourth year students 1967/8, an additional association (r = .27) between attitude Factor 4 and 'O' Grade passes (V24). The more 'O' Grades a student had, the more

occured in both years of the project.

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favourable his score on this factor.

7.55 Fifth year students

A small group (n = 47) of fifth year students were investigated in 1968/9. Associations were observed (r = .40) between scores on attitude Factor 4 (V15), "Attitude to Education", and the size of the student's home area (V19) and his 'O' Grade passes (V24). Those students from smaller towns and villages, and those students with more 'O' Grades, tended to score more favourably.

Summary

The "Courses for Craftsmen" study was not intended to produce complex analyses of craft apprentices, but rather to indicate trends and associations among numerous pieces of information. This chapter continues that policy by not mounting complex regression or factor analyses on the correlation data. A possible disadvantage of this, however, is that we observe associations between variables and cannot say that these imply relationships, since two items may correlate with each other mainly because they are related with a third item.

Nevertheless, the observed associations in the correlation data do tend to corroborate a number of significant differences observed in previous chapters. Throughout this chapter associations are mentioned between attitudes and sex, age or seniority, ie course and apprenticeship, and external examination results. There are also a number of associations between attitudes and year of leaving school, 'O' Grade passes, father's occupational level, number of firms worked for, and job choice. All these main associations have also been mentioned in previous chapters when measuring significant differences between groups.

A number of other associations were observed which have been seldom mentioned previously. Associations seem to exist between attitudes and type of school attended and between attitudes and being married. For certain groups of students, associations have also been observed between attitudes and position in family, leisure time activities and size of home area.

The observed associations indicated that more links exist between attitudes and other variables when the students are analysed by course, rather than by college and year of course. Each course seems to attract entrants of a different type and it is interesting to observe that of the three groupings where attitude Factor 1 did not produce the greatest number of associations, two were course groupings, Mechanical and Caterers (7.42, 7.44), while the third, College D (7.34), was a grouping containing only engineering apprentices.

Comments

The evidence from this study continues to point towards the importance of making serious attempts to improve the attitudes towards further education of those students who are new entrants to college and especially those whom the education service has previously considered "failures" in the sense either of type of school attended or length of schooling or examination success.

This chapter reinforces the association between attitudes and examination success, although the question of attitudes and external examinations still poses a "chicken and egg" dilemma where in certain cases one might argue that passing an examination promotes more favourable attitudes, while in other cases one might argue that students pass external examinations because they had more favourable attitudes in the first place.

The importance which a technical college places on examinations will determine how much importance it places on attitudes. Since this chapter indicates that only about 10%-20% of the variance in examination results can be accounted for by attitudes, many colleges will continue to disregard student attitudes. The colleges concerned with student attitudes will however find in this chapter a number of pointers towards improving these attitudes.

References

Psychological Statistics - Quinn McNemar (Wiley Toppan 1955)

CHAPTER 8

SUMMARY AND CONCLUSIONS

1 Procedure

In each of the preceding chapters there are summaries detailing the differences which were observed within various student groups and the associations between Attitude Scores and other variables. From the information in these chapters it is possible to indicate in this chapter some of the most important influences on the students investigated. It must be borne in mind that this report describes the situation which existed in some craft courses in some colleges between 1967 and 1969.

2 All students

A number of items of general information were available on all the students in the investigation. The trends in attitudes which emerged indicated that female students and those who were older and in more senior years of their courses held more favourable attitudes. The differences which existed tended to be between courses rather than colleges and to be in favour of those who passed external examinations.

The craft students who participated in this investigation had generally received a "junior secondary" (= secondary modern) type of education, leaving their secondary school after three years with no 'O' Grades. There was a tendency for first and second born children to be over-represented in this sample, while the majority of their fathers were in manual occupations.

Many of the students had chosen their job in terms of their school experience or because of its future prospects. The interview evidence suggested that these jobs had been secured by personal contacts but the questionnaire evidence indicated a more important influence to be school and the Youth Employment Service. The students' answers showed little awareness of an active training policy in their firms but, apart from a considerable number who saw emigration as their main ambition, most students thought of their future as being mainly in their present job.

The criticisms of further education made by students fell into two main areas - the college and the course.

Their experience of the commercial provision of cafes and clubs made them a little critical of the facilities of their colleges. College played little part in the students' social and recreational life mainly because of the students' lack of interest and their other established pursuits. In giving their opinions on their courses, the students preferred no one form of attendance above all others. Within the course, more workshop activities was the change most frequently requested, although many students were reasonably satisfied with their present course. Apart from Practical, Theory was the most popular subject while the least popular subject was Liberal Studies, closely followed in order of unpopularity by Science and Calculations. One of the difficulties many students saw in further education was that the siting of some colleges entailed considerable travelling for the students.

Particular criticisms of their further education fell into four main areas. The facilities of the colleges, common rooms and refectories, were seen as unsatisfactory; the fact that for some courses the day of attendance was longer than the day of work was criticised; the relevance of some parts of the course, eg Calculations and Liberal Studies was questioned; and improvement was sought in the flow of information from college authorities to students.

Nevertheless, attendance at college was seen as being beneficial in allowing opportunities to gain certificates and experience, although 23% of all students discontinued their further education between the 1967/8 and 1968/9 phases of the investigation.

3 Female Catering Students

The only female students involved in this investigation were those on the Catering Craft courses. It is therefore only possible to compare these female students with their male counterparts.

The female Caterers were found to have better attitudes than male Caterers. They were also more likely to be older, to live in smaller towns and to be

members of larger families. Other differences noted for female Caterers were their views on facilities and their club memberships. The females considered themselves to be less well provided with common room amenities and they were less frequently members of clubs and societies than were male Caterers.

Apart from these few differences noted above the main tendencies observed for female students were also found in all Catering students whether male or female and some were also reported for FT and BR students. This would suggest that, once again, type of course attended and form of attendance are equally important with or more important than the sex of the student.

4 External Examinations

Apart from the association, frequently reported, between attitudes and passing or failing an external examination, another association existed between passing or failing and year of apprenticeship. This leads to the conclusion that those who have missed a year of their further education or who have previously failed an internal or external examination are more likely to fail again.

The other reported association between school performance and FE examination success only strengthens the previous conclusion by indicating that the success syndrome is evident early in a young person's education and can continue throughout his education.

5 Modes of attendance

The students who enter FT and BR courses are among those who have something more to show for their secondary education in that 69% of the FT and BR students in 1968/9 had had four years of secondary education and 26% of the FT and BR intake had 3 or more 'O' Grades. Having had this previous experience they were however more demanding about the content of their courses, desiring further education to take them further than their secondary school did.

These demands are generally met and so the attitudes of such students tended to be more favourable.

Their expectations were however disappointed when considering the facilities and amenities provided for them by their colleges. When colleges have only a few hundred FT and BR students in a population of thousands, there are difficulties in deciding to devote much time and money to cater mainly for FT and BR students. Many FT and BR students did, however, feel strongly that some improvements are necessary in their common rooms, refectories and recreation opportunities. Since FT and BR students were distinguished by having more leisure interests, their interest in recreation is all the more important.

6 The colleges

There were a few observed differences between colleges on questions about course content. For example College B students were more anxious to see Practical improved than were College A students. The pattern of interests for students in each college also showed differences mainly between those in the city colleges and those in the county colleges. Students from the cities seemed to desire more sporting amenities and to have a sufficiency of social amenities while students from the smaller towns and villages showed the reverse pattern.

In general, the main differences between colleges arose on questions about college facilities. One possible reason for these differences is the age of the college buildings, for the newer the facilities the more the students were satisfied with them. Another possible reason for these differences is the range of courses and forms of attendance for each college. In colleges with considerable numbers of FT and BR students, especially FT and BR students following courses nearing or reaching degree level, more attention has been paid to meeting student needs in terms of social and recreational amenities.

The age and type of technical college attended are factors which distinguish between the students in the four colleges investigated.

7 The courses

For each of the five courses a different set of influences was observed. In general however, two main areas emerged, the relationship between the school leaver and employment and the relationship between employment and further education.

On a number of occasions throughout this report, it has been observed that the status of a particular trade within the community and the ways in which school leavers found a job discriminated between the various courses investigated.

It is also apparent that the way an industry organises its training, the opportunities for promotion which exist within that industry and the student's perceptions of further education's relevance to his industry and his prospects were of importance to each course group.

In courses such as Catering and Electrical Installation Work where the majority of students found no conflict between college and their jobs and ambitions, more favourable attitudes prevailed, but in other courses where conflicts were evident, less favourable attitudes were found. Joiners, for example, indicated a conflict between the hours worked on the job and the hours worked at college, Mechanicals indicated a conflict between the "real" tasks at work and the "unreal" tasks in college, and the Fabricators indicated a conflict between the job they had and the job they desired.

8 Year groups

As students make their way through their further education they widen their outlook and begin to examine their further education in terms of how well its amenities compete with the amenities available to them as adult members of the community.

The students in the earlier years of their courses saw further education mainly in terms of the content and form of the course and their attitude would seem to be affected by any changes in these aspects of further education.

Older students accepted further education because they realised the importance of qualifications in furthering their careers, but at the same time

they tended to criticise the amenities of their colleges as not comparing favourably with the commercial provision.

9 Conclusions

The various factors which are mentioned throughout this and previous chapters as influencing students and having an effect on their attitudes towards further education fall into two broad groups, those which the further education service can do nothing about and those which the service can do something about, if it wishes.

Among the factors over which colleges have no control are the sex of their students, their marital status, their father's occupation, their year of leaving secondary school, the number of 'O' Grades they have and the form of their industrial training. The importance of these factors as influences on craft students should however be considered so that their effects may be used to the positive advantage of the students.

Among the factors which the further education service can influence are the forms of attendance offered to each student, the facilities provided for student social and recreational activities, relationships between student and authority, the hours of attendance required of each student, the "practical" content of each course, and the student's success in external examinations and the consequence of that success in terms of job opportunities.

Each grouping into which students can be divided produces a slightly different profile of attitudes and influences. This indicated that there is no overall prescription which would cure the problems set out in this investigation, but that the attitudes of each grouping into which students can be divided must be considered separately.

By bringing to light some of the incentives and disincentives perceived by craft students in further education and the objectives of craft students in taking further education courses, this investigation may provide the further education service with information required for consideration of changes in its colleges and courses along the lines indicated by these craft students.

Appendix A

INQUIRY INTO FURTHER EDUCATION

Student Questionnaire

1 Name

2 Date of birth

3 Address

4 Employers

5 Secondary school attended

6 What class were you in when you left?

7 How many brothers and sisters have you?

8 What is your father's job?

9 How long have you been an apprentice?

10 How many firms have you worked for?

11 In how many different trades?

12 Are you married or single?

Appendix A(2)

INQUIRY INTO FURTHER EDUCATION

Student Questionnaire

1 Name

2 Address

3 Firm

4 SCE passes (O Grade and H Grade)

5 Your position in the family (eg eldest, second etc)

6 Does your father work at (a) the same job (b) the same firm?

7 Have you signed indentures with your firm?

8 When you left school was this the job you wanted?

9 If not, what job did you want to do?

10 Are you married or single?

Appendix B

INQUIRY INTO FURTHER EDUCATION

Student Opinion Questionnaire

Code No ..... Date .....

Instructions

A Read the following list of statements about Part-Time Day Release Education.

B Beside each statement a space has been left for you to indicate your opinion as follows -

Strongly agree	++
agree	+
undecided	?
disagree	-
Strongly disagree	--

C Please make sure you indicate your opinion for each statement.

1 The technical college rules regarding student behaviour should be made more reasonable. ( )

2 If it were not part of an apprentice's job to attend technical college one day a week many apprentices would not go. ( )

3 What the apprentice learned at school is of little help in understanding what he is taught in Technical Colleges. ( )

4 Co-operation between technical college teachers and the apprentices' employers is desirable. ( )

5 One way of getting on at work is for apprentices to study for exams. ( )

6 An apprentice should be able to get promotion at work without passing exams. ( )

7 Nothing is gained by an apprentice spending a part of the day at technical college studying subjects other than the compulsory ones. ( )

8 Most people are glad to leave school. ( )

9 Doing homework is of little value to apprentices. ( )

10 Subjects taught in technical colleges are not closely enough connected with everyday work. ( )

11 To do all the homework required by the technical college course takes too much time. ( )

12 Little is gained by apprentices attending technical college one day a week. ( )

13 The classroom subjects of the course are helpful. ( )

14 Part-time day release education is a valuable use of time for apprentices. ( )

15 Teachers in technical colleges should have an opportunity of visiting the firms from which the apprentices come. ( )

16 Being taught in a technical college subjects which were taught in school is helpful to the apprentice. ( )

17 There should be more Liberal Studies for every apprentice. ( )

18 Apprentices should be allowed more common room facilities in a technical college. ( )

19 Everyone should have at least one day a week's education up to the age of 18. ( )

20 The teachers in technical colleges don't know enough about what apprentices do at their work. ( )

21 Apprentices learn best by working with a good journeyman. ( )

22 Technical College teachers treat apprentices like children. ( )

23 An apprentice should be allowed to smoke in college if he likes. ( )

24 Apprentices are not interested in hearing about politics. ( )

25 Many apprentices would stay on at college after classes are finished, if sport and recreational facilities were laid on. ( )

The information contained on these sheets is highly confidential, and on no account will any of it be made known to any other person.

Appendix B(2)

INQUIRY INTO FURTHER EDUCATION

Student Opinion Questionnaire

Code No ..... Date .....

Beside each question there is a box for you to indicate your opinion, choosing one of the five following symbols.

Strongly agree	++
agree	+
undecided	?
disagree	-
Strongly disagree	--

1 Co-operation between technical college teachers and the apprentice's employers is desirable. ( )

2 An apprentice should be able to get promotion at work without passing exams. ( )

3 Nothing is gained by an apprentice spending part of the day at technical college studying subjects other than the compulsory ones. ( )

4 The classroom subjects of the course are helpful. ( )

5 Technical college teachers treat apprentices like children. ( )

6 The teachers in technical colleges don't know enough about what apprentices do at their work. ( )

7 One way of getting on at work is for apprentices to study for exams. ( )

8 Subjects taught in technical colleges are not closely enough connected with everyday work. ( )

9 Part time day release education is a valuable use of time for apprentices. ( )

10 Doing homework is of little value to apprentices. ( )

11 An apprentice should be allowed to smoke in college if he likes. ( )

12 Teachers in technical colleges should have an opportunity of visiting the firms from which apprentices come. ( )

13 To do all the homework connected with the technical college course takes too much time. ( )

14 Everybody should have at least one day a week's education up to the age of 18. ( )

Appendix C

INQUIRY INTO FURTHER EDUCATION

Student Interview Schedule

1 What the student thinks of the college -
   a) the building
   b) the amenities

2 a) What he thinks of day release
   b) and its alternatives

3 a) What he thinks of each subject
   b) the content
   c) the teachers

4 a) What he thinks he ought to get at college
   b) how far that would make him work harder

5 a) What kind of training he gets from his firm
   b) how it is supervised

6 Why he works for that firm in that job

7 What he thinks of the industrial situation

8 a) What his ambitions at work are
   b) how further education will help realise them

9 What he does in his spare time

10 a) What other interests he would like to acquire
   b) how the college has helped or could help in these interests

11 What he would like to see happen to technical colleges

Appendix C(2)

INQUIRY INTO FURTHER EDUCATION

Student Interview Schedule Stage II

1 What do you think of each subject in relation to your work?

2 What do you think of this course as a whole?

3 What changes would you like to make in your course?

4 What are your ambitions in work?

5 What good do you think coming to college does?

6 What kind of training do you get from your firm?

7 How is your training supervised?

8 What are your spare-time interests?

9 How did you meet most of your present friends?

10 Are you considering emigrating?

11 What would make you more content to stay in this country?

12 What are your average weekly earnings?

13 What kind of out-of-class activities should the college provide?

14 Are there any other spare-time activities you would like to take part in?

15 What would make you change your job?

16 What plans have you made for your life?

17 What changes would you like to make in this college?

18 What parts of college life do you think the students should have a say in running?

Appendix D

INTERPRETING INTERVIEW ANSWERS

The intention behind the interviewing was that the answers from all students should be comparable. Therefore, although no limit was set on the student's responses, the questions and their order were clearly fixed by the interview schedules (Appendices C & C2). On a few occasions the order of posing the questions was altered where the student's answer to a question provided a natural lead in to another question which would normally have been taken later.

The interview was conducted in as informal a manner as possible and from the outset the student was clearly told of the confidentiality of his answers. It was probably implicit in the interviewer's remarks that the student ought to feel free to be critical. This may explain the differences noted in Chapter 5.7 between questionnaire and interview responses.

The method of combining the answers from all the interviews was initially to list all the responses, then to select the most frequent responses, and finally to see whether some of the less frequent responses could satisfactorily be combined with some of the "most frequent" categories. In almost all questions, the varying responses could be conveniently reduced to between three and seven categories.

In view of the fairly standard method of procedure and the similarity of conditions from interview to interview, the interpretations placed on the interview responses seem justified.

Student Interviews

The interviews conducted by the Research Officer were checked when W T G Bates, then of the Applied Psychology Unit of the University of Edinburgh, used the same schedule to interview a number of students previously interviewed by the Research Officer. The answers received were similar in all important respects, suggesting that the Research Officer's *modus operandi* was satisfactory.

This Appendix contains the full text of two interviews.

Interview 1

Female Catering Student interviewed in the first year of the project, aged 18½

Q What do you think of the college?

A It's all right, but too like school in many respects.

Q What do you think of the facilities for students?

A There is nothing to do. We are not allowed to make any noise in our Common Room because it's right next door to a classroom. And the canteen food and facilities are bad.

Q What do you think of Day Release?

A It's super. A day off work. An opportunity to improve your knowledge. I feel much better after my day here.

Q Would Block Release be any better?

A You'd get more in. You'd be able to do a full schedule of work and not forget between times.

Q What do you think about the Full-Time course?

A It was good fun sometimes because on Full-Time you really get into the swing of the college, whereas on Day Release you let it all go past you.

Q What do you think of your course?

A On the practical we get fiddling wee things and special dinners, instead of the bigger kitchens and real work we are used to in our jobs. Catering is the poor relation in this college. And the teachers are not familiar enough with the kind of work we do in our firms. The Theory is all right, but there is too much repetition. I enjoy the Liberal Studies. It's a nice break.

Q Do you think there is anything missing from your course?

A The course needs better organised. We should get to run the college kitchen and have the opportunity of catering for big parties in the evenings. We should also get taken round big hotels and institutions to see how they work. They might even take us to the Continent.

Q When you work hard at college, why do you do it?

A I know at bottom that I want certificates and a choice of jobs.

Q What kind of training do you get in your firm?

A The Supervisors are backward in their ways, keep using standard recipes and don't even read "Catering Times". Often they actually ask me what to do!

Q Why did you choose this job and this firm?

A I started working in a restaurant on Saturdays and liked it so much that when I had finished my Full-Time course I went back there. By the time I was 17, I was responsible for all the catering, but I found it varied and good experience. When I found that I was being overworked I went to my present job. But I would like to go back to restaurant work when I'm old enough to command a better salary.

Q What do you think of your present firm?

A Too much money has been spent on the building and not enough on the kitchen equipment. People in charge are from Do School and they don't know how to run it properly.

Q What are your ambitions?

A I'd like to take my Highers and become a Demonstrator or a Catering Officer. I'm poor at Accounts though.

Q What do you do in your spare time?

A I'm in a Sub-Aqua Club, I play ten-pin bowling. My boyfriend's in the Water Polo team so I started that for a laugh. And in the summer I play tennis and hitch-hike.

Q How did you meet most of your friends?

A Me and my chum used to sit in the lounge of the ---- Hotel hoping to meet boys. That's how I met my present boyfriend.

Q Are there any other things you would like to do in your spare time?

A I fancy being an "au pair" to widen my knowledge of other countries.

Q How could the college improve its clubs?

A There should be closer links between the college and your work. They could easily publicise forthcoming events at college in our work where we'd have a better chance of seeing them.

Q Are there any other changes you would like to make in the college?

A We need more girls here. The Students' Association should try harder to make Day Release students feel part of it. And let the students run their own tea/sweet shop to raise money. Overall the college is far too strict.

Interview 2

Male Engineering student interviewed in the second year of the project, aged 20

Q Is your course relevant to your work?

A The practical is very good here. The workshops are well-equipped and you get the chance to use a lot of different machines. I know I'm using the Theory a lot in my work.

Q What do you think of the course as a whole?

A It's pretty good, copes with most of the trade, but some of the Theory is a bit advanced.

Q Well, how would you improve the course?

A We need a new Theory teacher for a start and more lab work in Theory. Then the EITB scheme says we should have grinding and we haven't had it.

Q Have you any ambitions in work?

A I don't want a desk job. I'd be content to be good at toolmaking or maintenance.

Q What good do you think coming to college does?

A I couldn't have got on so well in my job without the college. It's not just the certificates but the useful knowledge, the broadening experience.

Q What kind of training do you get from your firm?

A Recently we were getting moved about from department to department so often that we didn't have a trade to call our own. But we got that sorted out. They have a good scheme for letting us see round other firms, which lets you see other machines and realise that your own firm isn't as bad as you thought it was.

Q Who supervises your training?

A It's run almost right from the top and we get every chance to complain. The Personnel Director interferes a bit though and keeps secrets from the Managing Director. I think the Managing Director should make a bit more time for his apprentices.

Q What do you do in your spare time?

A The motor's my great hobby, but I'm going to night school two nights as well.

Q Are you thinking of emigrating?

A Maybe - my mate's going to Canada.

Q What's wrong with this country?

A I don't like the government. Every budget hits the man who likes to enjoy himself (taxes on drink, smokes, petrol) and the puritan gets off scot free.

Q What kind of clubs and activities should the college lay on?

A There should be more competitions which would attract lots of students.

Q Are there any other things you would like to do in your spare time?

A There's basketball starting at home. If I had time, I would play that and golf.

Q What would make you change your job?

A If there was money in it. I might like to be a motor mechanic. Though maybe it's only my own car I'm interested in and I couldn't be so keen on other folks.

Q What are your plans for your life?

A I'll go to England for more money and security, and if I don't like that I'll go and join my mate in Canada.

Q What changes would you make in this college?

A We should have more freedom to smoke. The present rules are ridiculous and just lead to abuse.

Q What parts of college like do you think the students should have a say in running?

A I think that if the students can agree amongst themselves, they should have some power to run the facilities.

Appendix E

CONSTRUCTING THE MULTIPLE CHOICE QUESTIONNAIRE

In order that some check could be made on the responses made by students in the first interview, a questionnaire was drawn up for administration to large groups of students. This questionnaire was designed to include all the questions from the first interview with the addition of a few extra pieces of information which were hoped to yield some further pointers on the questions of student attitudes and opinions.

From the interview analysis (Appendix D), the categories of responses made were readily available. Those categories which had been used in the analysis were transferred to the questionnaire, making it a multiple choice instrument. Where it seemed that the response categories could be ordered in some meaningful way (eg "good", "reasonable", "bad") they were presented in order, but where it seemed that there was no hierarchy of response, the categories were presented at random.

The order in which the questions were presented in the interview was adhered to as far as was convenient in the questionnaire, so that the completed questionnaire was as similar to the interview except for the basic difference between interviews and questionnaires.

By constructing a questionnaire in the manner described, comparisons could be made between interview and questionnaire responses, as described in Chapters 4 and 5.

INQUIRY INTO FURTHER EDUCATION

Multiple Choice Questionnaire

Code ..... Date .....

Please underline the one most suitable answer in each question unless otherwise stated.

SECTION A

1	The student facilities generally are	good reasonable bad
2	The lunches are	good reasonable bad I lunch out
3(a)	The common rooms are	good reasonable bad
3(b)	The common rooms	should be mixed should not be mixed
4	I use the library	regularly occasionally never
5	The car parking facilities are	good reasonable bad
6	All the student facilities should be run	by students by staff
7	My opinion of Day Release is that	It's a day off work It's better than my work It's all right You forget between weeks It costs me too much money I learn more at my work
8	My opinion of Block Release is that	I would learn more It would be over sooner I would forget more I would get fed up It would cost too much money
9	My opinion of coming to college full-time is	It is best at the start of the course It is best at the end of the course It would be too similar to school It is a waste of time

Answer Questions 10-14 with reference to your work

10	I think the practical here is	good useful OK irrelevant bad out of date

11	I think the theory here is	good useful OK irrelevant too deep bad
12	I think calculations are	good relevant OK never used a waste of time
13	I think science is	good relevant OK never used a waste of time
14	I think drawing is	good relevant OK never used a waste of time
15	I think liberal studies are	good pass the time useful to us as people no good to our job boring rotten should be abolished
16	I would prefer liberal studies if we had a choice of subjects	yes no

SECTION B

1 Here are some of the qualities which teachers have. Underline those which you think are most important.

sense of humour not too strict fair treats his class as individuals
knows his stuff is interesting talks your language understands you

2 Here are some suggested changes in your course. Underline as many as you think are important.

more practical more theory more calculations more drawing
more liberal studies more PT more free time more choice of subjects

3 Here are some reasons for coming to college. Underline those which you think are most important.

You get certificates. You get a better practical training.
You get the theory you miss at work. You get the chance to meet people.
It helps you to get promotion. It helps you to make a better wage.

4 Which one of the following reasons makes you work hard at college?

to pass examinations to please your firm to get a better job
for the pleasure of doing a good job you like what you are doing
to learn to get finished sooner

5 I got my present job through:- the youth employment officer
my parent a relative a friend who worked there by going to the firm
by answering a newspaper advertisement through my school (or college)

6 I wanted this job because:-

I liked the subject at school. I thought I would be good at it.
I had done similar work at home. I thought it was a job with a future.
My parents wanted me to take it. For the money.

7 I chose this firm because:-

My parents recommended it. It was near home. My friends said it was good.
I was sent to it. It had a good reputation. It paid good wages.

8 My ambitions are:-

none yet to be good at this job to get promotion to emigrate
to make money to change jobs when my time's out to travel to settle down

SECTION C

1 What clubs are you a member of?

2 What sports do you play a) regularly?

b) occasionally?

3 What hobbies do you have?

4 What other activities do you take part in?

5 What other activities would you <u>like</u> to take part in?

6 <u>The trouble with the clubs and activities in this technical college is</u>:-
I've too far to travel. They are badly organised. They are badly advertised.
They finish too late at night. Too many are sports clubs.
The atmosphere of the college puts you off. You cannot get a drink.
Too many clubs meet in the evenings.

7 <u>What college clubs do you attend</u> a) regularly?

b) occasionally?

8 <u>I have never attended a college activity because</u>:-
I have too many other interests. Outside facilities are better.
I am glad to get out of the college. You cannot bring your friends.

9 <u>Here are some of the main changes which could be made in the college</u>:-
<u>Please underline those which you favour most</u>.

better common rooms cutting down the hours making courses more relevant
giving students more say in running the college

Appendix F

CODING OF DATA

For each of the 82 variables on which data was available, a coding scheme was drawn up to take account of the available responses. A description of the coding follows.

Variable 1

Type of attendance in 1967/8

1 - Full Time
2 - Integrated Training
3 - Block Release
4 - Day Release
5 - Evening Classes

Variable 2

Type of attendance in 1968/9

Coding as VI

Variable 3

Course attended

1 - Joiners
2 - Mechanical Engineering
3 - Electricians
4 - Caterers
5 - Fabricators

Variable 4

Year of Course attended 1967/8

Coded 1 - 5

Variable 5

Type of Course attended 1968/9

1 - 5 Years 1 to 5 Craft courses
6 - Full Technological Certificate
7 - City and Guilds Technician Course

Variable 6

Attitude Scale Factor 1 Score 1967/8

Variable 7

Attitude Scale Factor 2 Score 1967/8

Variable 8

Attitude Scale Factor 3 Score 1967/8

*

Variable 10

Attitude Scale Factor 4 Score 1967/8

Variable 11

Attitude Scale Factor 1 Score 1968/9

Variable 12

Attitude Scale Factor 2 Score 1968/9

Variable 13

Attitude Scale Factor 3 Score 1968/9

*

Variable 15

Attitude Scale Factor 4 Score 1968/9

Variable 16

Age at 1/1/68 - in completed months

Variable 17

Age at 1/1/69 - in completed months

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* Variables 9 and 14 were alternative scores for Factor 4 included at an early stage in the project and subsequently deleted.

Variable 18

Size of home town or village 1967/8

1 - 100,001 +
2 - 50,001 - 100,000
3 - 25,001 - 50,000
4 - 10,001 - 25,000
5 - 5,001 - 10,000
6 - 2,501 - 5,000
7 - 1,001 - 2,500
8 - 1,000 and less

Variable 19

Size of home town or village 1968/9

Coded as Variable 18

Variable 20

Relationship of home area to college attended 1968/9

1 Same town
2 Same county
3 Travels from other county to college nearest work
4 Travels from other county with college to this college
5 Travels from other county with no college
6 Living away from home in order to attend this college

Variable 21

Relationship of home area to college attended 1968/9

Coded as Variable 20

Variable 22

Secondary School attended

1 - Senior Secondary
2 - Comprehensive
3 - Junior Secondary

Variable 23

Year of leaving school

3 - 3rd Year
4 - 4th Year
5 - 5th Year

Variable 24

Number of 'O' Grades held

Variable 25

Number of 'H' Grades held

Variable 26

Size of family

Coded by number of children (including respondent)

Variable 27

Father's occupation (by Registrar General's classification)

1 - RGI
2 - RGII non-manual
3 - RGII manual
4 - RGIII non-manual
5 - RGIII manual
6 - RGIV non-manual
7 - RGIV manual
8 - RGV
9 - Not working

Variable 29

Relationship of student's job to father's

1 - No relationship
2 - Same job as father
3 - Same firm as father
4 - Same job and firm as father

Variable 30

Year of apprenticeship 1967/8

Variable 31

Year of apprenticeship 1968/9

Variable 32

Number of firms worked for between leaving school and 1/1/69

Variable 33

Number of trades worked at between leaving school and 1/1/69

Multiple Choice Questionnaire Section A

Variables 34-49

Responses to each question numbered according to the order of their appearance on the questionnaire. (See Appendix E)

The only exception was Variable 40 (Section A-6) where underlining "students" and "staff" was coded 3.

Variable 50

Sex of Student

1 Male
2 Female

Variable 51

Status of Student 1967/8

1 Single
2 Married

Variable 52

Status of Student 1968/9

1 Single
2 Married

Variable 53

Secondary School attended

1 Non-denominational
2 Roman Catholic

Variable 54

Progress in college course 1967/8 to 1968/9

1 Passed external examination
2 Failed external examination
3 Passed non-external year
4 Failed non-external year

Variable 55

Whether indentured

1 Yes
2 Not known
3 No

Variable 56

Whether this was desired job or not

1 Yes
2 Not known
3 No

Variable 57

If not desired job what was

1 Better type of job
2 Different trade
3 Poorer job
4 Not known

Variable 58

Whether a choice should be offered in Liberal Studies

1 Yes
2 No

Multiple Choice Questionnaire - Section B

Section B Question 1 was omitted as of no value.

Variable 59, 60

What changes would you make in your course

Subjects tended to make two responses.

The answers were therefore coded separately.

V59

1 - more practical
2 - more theory
3 - more calculations
4 - more drawing
5 - more liberal studies

V60

1 - more PT
2 - more free time
3 - more choice of subjects

Variables 61-66

Multiple Choice Questionnaire B3-8

The answers were coded according to the order of their appearance in each question. (See Appendix E)

Multiple Choice Questionnaire - Section C

Variable 67

Number of clubs listed by students

Variables 68-71

Clubs listed in Variable 67 were categorised:-

V68 1st club listed by student

1 - Service
2 - Voluntary
3 - Sports
4 - Social
5 - Entertainment

V69 2nd club listed by student

Coded as V68

V70 3rd club listed by student

Coded as V68

V71 4th club listed by student

Coded as V68

Variable 72

Number of regular sports listed by student

Variable 73

Number of occasional sports listed by student

Variable 74

Number of hobbies listed by student

Variable 75

Number of other activities listed by student

Variable 76

What other activities would you like to take part in?

The responses on this question were coded as follows:-

1 - Service organisation
2 - Youth organisation
3 - Sporting activity
4 - Social activity
5 - Entertainment activity

Variable 77

The trouble with the clubs and activities in this technical college is:-

The responses were coded by the order of their appearance in Section C - 6. (See Appendix E)

Variable 78

Number of regular college clubs listed by student

Variable 79

Number of occasional college clubs listed by student

Variable 80

I have never attended a college activity because:-

The responses were coded by the order of their appearance in Section C - 8. (See Appendix E)

Variable 81

Main changes in college

The responses were numbered by the order of their appearance in Section C - 9. (See Appendix E)

Variable 82

Total number of sports, hobbies and activities listed by student

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